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MOBILIZATION AND DEFENSE MANAGEMENT TECHNICAL REPORTS
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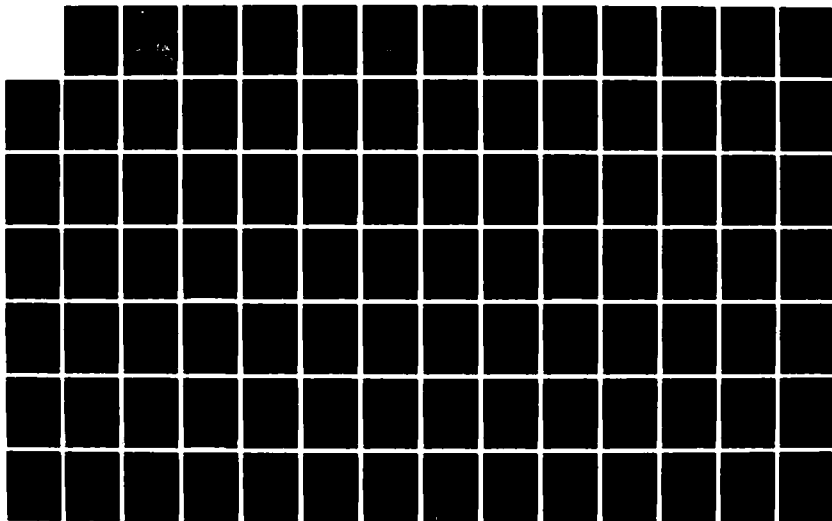
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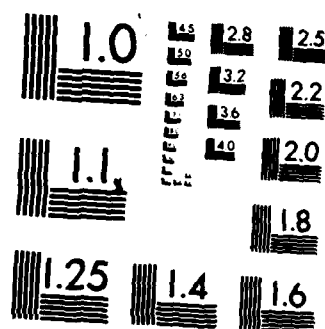
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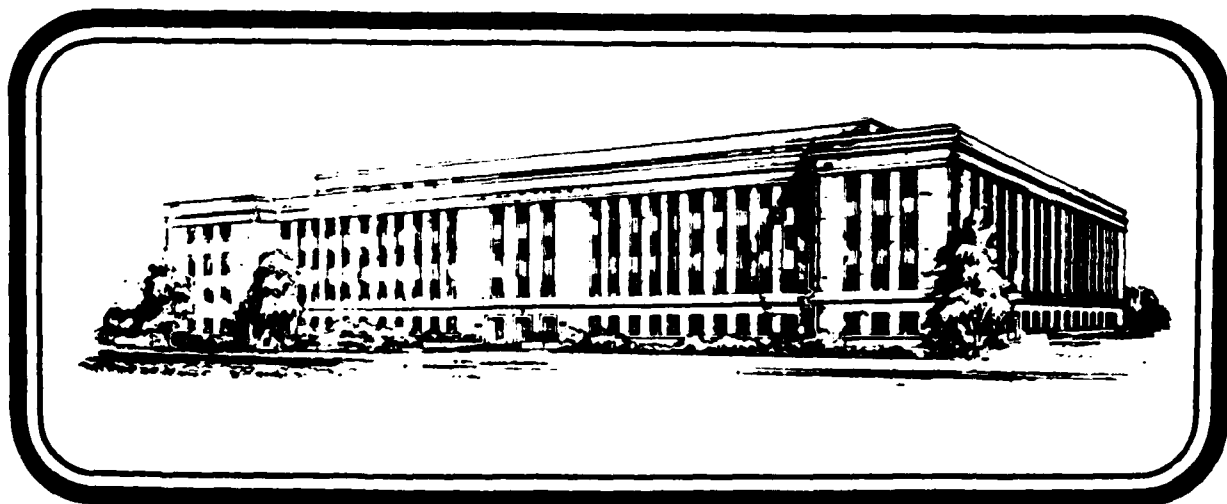
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**MOBILIZATION AND DEFENSE MANAGEMENT
TECHNICAL REPORTS SERIES**

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**THE SINGLE MANAGER FOR CONVENTIONAL
AMMUNITION: ANOTHER LOOK**



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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER NDU/ICAF 83/015	2. GOVT ACCESSION NO. AD-A438226	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) THE SINGLE MANAGER FOR CONVENTIONAL AMMUNITION, ANOTHER LOOK		5. TYPE OF REPORT & PERIOD COVERED IR #17, AY 82/83
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) EDWARD J. CZAPLICKI, GS-15; FRED L. JONES, LTC, USMC; ROBERT A. KAMRATH, CDR, USN; JAMES M. LABRIOLA, COL, USAF; BRIAN D. MAUDEN, LTC, ANG; CLINTON D. SUMMERFIELD, SOL, USAF		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS INDUSTRIAL COLLEGE OF THE ARMED FORCES FORT LESLEY J. MC NAIR WASHINGTON, DC 20319		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS INDUSTRIAL COLLEGE OF THE ARMED FORCES FORT LESLEY J. MC NAIR WASHINGTON, DC 20319		12. REPORT DATE MAY 1983
		13. NUMBER OF PAGES 90
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) NATIONAL DEFENSE UNIVERSITY FORT LESLEY J. MC NAIR WASHINGTON, DC 20319		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) UNLIMITED APPROVAL FOR PUBLIC RELEASE		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) N/A		
18. SUPPLEMENTARY NOTES N/A		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) N/A		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This paper traces the evolution of conventional ammunition management by the Department of Defense from World War I to the present. It summarizes published studies and reports related to the organization of ammunition management within DOD and analyzes critical management functions. Finally, it proposes an optimal organization which strengthens ammunition management by providing requisite authority and clear lines of control.		

INDUSTRIAL COLLEGE OF THE ARMED FORCES
NATIONAL DEFENSE UNIVERSITY

MOBILIZATION STUDIES PROGRAM REPORT

THE SINGLE MANAGER FOR CONVENTIONAL AMMUNITION, ANOTHER LOOK

by

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A RESEARCH REPORT SUBMITTED TO THE FACULTY
IN
FULFILLMENT OF THE RESEARCH REQUIREMENT

RESEARCH SUPERVISOR: COLONEL KAY S. KIMURA, USA

INDUSTRIAL COLLEGE OF THE ARMED FORCES
MAY 1983

Accession For	
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ABSTRACT OF STUDENT RESEARCH REPORT
INDUSTRIAL COLLEGE OF THE ARMED FORCES

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TITLE OF REPORT

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AMMUNITION, ANOTHER LOOK

SECURITY CLASSIFICATION OF REPORT

UNCLASSIFIED

REPORT NUMBER

M TR 417

ABSTRACT

PROBLEM STATEMENT: This paper traces the evolution of conventional ammunition management by the Department of Defense from World War I to the present. It summarizes published studies and reports related to the organization of ammunition management within DOD and analyzes critical management functions. Finally, it proposes an optimal organization which strengthens ammunition management by providing requisite authority and clear lines of control.

CONCLUSIONS AND RECOMMENDATIONS: The major conclusion is that the current ammunition organizational structure in DOD is not conducive to good management practice. Although DOD has recognized the need for centralization, progress has been painfully slow and the prognosis for further achievement is gloomy at best. The single manager for conventional ammunition is an organization borne of need but one that possesses neither the requisite authority nor adequate lines of control to function effectively in time of war. This paper recommends a reorganization to correct these deficiencies and proposes a model organization to satisfy the need in both peacetime and war.

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EXECUTIVE SUMMARY

This study is a management analysis of the Single Manager for Conventional Ammunition. In 1975, the Secretary of the Army was designated as the single manager by the Secretary of Defense. In turn, the functional responsibility was delegated to the Commanding General, U.S. Army Armament Materiel Readiness Command. The objectives of the single manager were to integrate conventional ammunition logistics of the military departments and obtain the highest possible efficiency and responsiveness in meeting military needs for ammunition both in peacetime and during mobilization or war.

There have been numerous reviews of the organization since its inception in 1975. Each of these invariably led to the identification of shortcomings within the system and recommendations for their correction. As with previous reviews, this study has also identified problem areas. Unlike the others, however, it is our overwhelming conclusion that there exists some fundamental problems with the system itself. It is the major conclusion of this study that there currently is no single organization or authority in charge of our nation's overall ammunition system and that this could potentially impact seriously on the nation's readiness posture and mobilization capability. Congruent with this, the major recommendation is a complete reorganization.

CHAPTER I
INTRODUCTION

Preface

Conventional ammunition management has been studied, reviewed and reported on numerous times in the last decade. Major reports have been published by private consulting firms, the Army, the General Accounting Office and the Congress. The latter has shown keen interest in ammunition management, a topic of discussion in Defense Appropriations Subcommittee hearings each of the last four years and subject of a special hearing by the House Government Operations Committee in 1981.

All of the evidence indicates there are major problems associated with ammunition management. Hopefully, this study is not just another in a decade long succession of critical reports that seem to evoke much emotion but considerably less attention than they deserve. This report is intended to be an objective look by six concerned students, away from the frenzy and pressures of the job, and secure in the knowledge that what follows has been thoroughly researched and is uninhibited thought unanimously held by the group.

The research was conducted over a seven-month period and consisted of an extensive search of the literature as well as numerous interviews and field visits to each of the military services. It would not be complete without acknowledging the tremendous dedication and high degree of competence demonstrated by the ammunition practitioners in each of the service departments.

Historical Perspective

World War II

Prior to 1939, the United States did not seriously contemplate a conflict of either the size or scope of World War II. Although mobilization planning was required by a 1920 amendment to the National Defense Act, little planning was done until U.S. involvement in the war seemed likely.¹

In 1940, the War Department began a program to provide approximately 100 ammunition production facilities at a cost of 3 billion dollars. This program was essentially complete by 1943 when the production base was capable of producing approximately 15 billion dollars worth of ammunition per year.²

Following World War II, the nation anxiously returned to a peacetime economy. Numerous wartime facilities were disposed of, including approximately 40 ammunition plants. The remaining 60 plants were placed in caretaker status. During the post-war period, the presumed policy was that any future war would be marked by formal mobilization of the economy with emergency controls exercised over critical industries. Mobilization planning was based on the assumption that all necessary goods and services would be supplied by the private sector.

Korea

The Korean hostilities compelled the Department of Defense to reactivate its 60 ammunition plants. Although these facilities were not severely degraded due to the short elapsed period since World War II, it nevertheless cost over 600 million dollars to rehabilitate and expand the facilities. More importantly, this effort took two years to complete but was sufficient to produce about 7.5 billion dollars worth of ammunition used in Korea.³ At

the end of Korean hostilities a huge inventory of ammunition remained. This contributed to a decision to dispose of approximately 30 ammunition plants and to close most of the remainder. A few facilities were operated well below capacity. The level of maintenance for most inactive plants gradually lessened with annual funds expended declining from 30 million dollars to less than one-third that amount within five years.

Vietnam

The Vietnam buildup was fraught with severe problems stemming from the policy decisions following Korea. DOD policy assumed that designated private producers, in addition to government plants, would deliver required ammunition in the event of hostilities. Unfortunately, no single organization was designated, nor personnel or funds allocated, to maintain contact with industry or to provide general overview of the combined public and private industrial base. The degree of lethargy was especially evidenced by the fact that between 1958 and 1965 research and development for conventional ammunition was minimal.

In 1963, however, an increased commitment in Vietnam became apparent, and ammunition appropriations spiraled from 800 million dollars in 1963 to 5.4 billion dollars in 1968.⁴

The reactivation of ammunition production plants for Vietnam was costly and time consuming. The plants dated from World War II, consequently they relied more on large numbers of people and less on automation techniques. They were in disrepair, and in some cases were unsafe. Shortages of experienced personnel, particularly in remote locations, were compounded by the fact that trained ammunition personnel from world War II were reaching

retirement age in growing numbers. In many plants, the equipment of World War II vintage had long been discontinued and spare parts were scarce, expensive, and with long lead times. As a result of these difficulties and in the absence of a management system to exercise control over the fragmented service ammunition organizations, the Secretary of Defense became increasingly concerned with ammunition management. Working groups at the OSD level played a major role providing control over requirements, production and inventory management.

Despite all the shortcomings, delays and expensive reactivation costs, ammunition production reached 2.7 million tons a year by late 1965, using fewer facilities than were used in World War II to produce 2.2 million tons per year.⁵

Post-Vietnam

Following the U.S. withdrawal from Vietnam, ammunition management control at the OSD level was relaxed and management again decentralized to the services.⁶

The historical pattern of the conventional ammunition production system is a recurrence of production gear-up followed by short wartime periods of high demand, followed by long peacetime period of little demand. The length of these periods is unpredictable and wartime production may be required with little forewarning.

The production system today is seriously degraded due to age and insufficient resources to properly maintain the facilities. There is also little being accomplished in the way of modernization, although large dollar amounts are continually programmed for this purpose in the out-years. The

result of this underfunding and lack of attention by DOD is poor readiness, with start-up times between 6 months and 3 years to be expected, depending on the facility.

Documentation Review

The concept of centralized management for conventional ammunition has been studied and examined at length, beginning in 1968. Following is a brief accounting of the major studies and reports.

1. "Conditional Operation of DOD Ammunition Production Facilities," Logistics Management Institute Study, July 1970.

As a result of considerable ammunition production problems experienced early in the Vietnam conflict, the Secretary of Defense, in 1968, directed that an independent evaluation of the ammunition production base be conducted. The idea was to prevent a repetition of the start-up delays, inadequate capacity and inefficient operations experienced during Vietnam.

The Logistics Management Institute (LMI), a private consulting firm, was selected to perform the study and for the next two years looked at both government owned and privately owned production facilities with a view toward comprehensive long-range planning.

The LMI report, published in 1970, was critical of the physical condition and obsolescence of the production base and seriously questioned whether the base would suffice during the next 5 to 25 years. The report's major finding, however, was that inadequate coordination of ammunition production occurred because ammunition management was divided primarily between two of the military services, the Army and Navy, and was even further

fractionated at lower levels within these services. Poor production coordination was exemplified by the fact that the Army or Navy often scheduled production for a critical item without full awareness of existing production or idle capacity in the other service. The LMI study strongly recommended implementation of a comprehensive centrally coordinated management system that would provide the necessary long-range planning to improve readiness, substantially reduce costs and avoid duplication in facilities, processes or in unnecessarily differentiated ammunition products.

2. General Accounting Office Report, "Effective Central Control Could Improve DOD's Ammunition Logistics," December 1973.

This was the General Accounting Office's (GAO) first study of ammunition management. As with the LMI study, GAO noted that the Army and Navy had the predominant roles in ammunition logistics within the Department of Defense (DOD) and that the management structure was not conducive to economy and efficiency. GAO recommended that the Secretary of Defense (SEC DEF) establish central management for all ammunition by creating a new ammunition organization, or by assigning this responsibility to a single service. They further recommended that the central manager be responsible for consolidating requirements for procurement, production, storage and distribution functions. Additionally, they believed the central manager should work closely with the services' research and development organizations to develop new items and to plan future production. GAO stated that: Centralized procurement could avoid interservice competition for the limited private industrial capacities; more accurate budget requests could reduce funds appropriated for procuring ammunition; DOD-wide scheduling of production,

modernization and mobilization could eliminate competition for appropriated funds; and improved storage and distribution management could reduce transportation and handling costs.

3. "Implementation Plan and Associated Impact Statements Relating to the OSD Proposal to Establish a Single Manager for Conventional Ammunition Procurement, Production, Supply and Maintenance," October 1974.

In response to the 1973 GAO recommendations for centralized ammunition management, DOD established the Joint Conventional Ammunition Production Coordinating Group (JCAPCG). This group operates under the Joint Logistics Commanders and consists of a coordinating committee and numerous working groups. In June 1974, the Assistant Secretary of Defense for Installations and Logistics requested the Joint Logistics Commanders to prepare an implementation plan and impact statements to gauge the consequences if a decision were made to establish a single service manager for conventional ammunition. The Joint Logistics Commanders assigned this task to the JCAPCG. In their report, the JCAPCG stated that the trend established in the mid-60's to unite the services in conventional ammunition management had been successful. They concluded that coordinated management was more effective than centralized management.

4. "Army Concept Study for the Establishment of a Single Service Manager for Conventional Ammunition," May 1975.

This study was undertaken following a decision by the Assistant Secretary of Defense for Installations and Logistics that the coordinated ammunition management approach would not meet wartime needs. The Secretary of Defense agreed and decided to name the Army as the single manager for conventional ammunition (SMCA).

While the DOD implementing directive was in draft form, the Army completed a concept study that made several assumptions for the optimal organization. Namely, that the single manager would be within the Army but would be a jointly staffed organization; that each service would retain responsibility for research, development and engineering; that the single manager would operate a national inventory control point to manage the whole-sale inventory; and that the single manager would perform the storage, maintenance, procurement and production functions for the Army. Lastly, the study recommended that the single manager be located in Washington reporting either to the Secretary of the Army or to an Army Command.

5. General Accounting Office Report, "Centralized Ammunition Management--A Goal Not Yet Achieved," November 1979.

In this report GAO found that the single manager for conventional ammunition needed more control and a stronger organizational position. The report was highly critical of the existing organization and believed it precluded further progress toward centralized management. Among the problems cited: the single manager lacks visibility, has limited communication channels, competes for resources with purely Army programs, is principally staffed by Army personnel and is therefore viewed by the other services as another Army organization in lieu of a DOD organization. To correct these problems, GAO made ten major recommendations as follows:

- a. Elevate the single manager's position by having him report directly to the Secretary of the Army.

- b. Assign all conventional ammunition items to the single manager.
- c. Give the single manager procurement responsibility for all conventional ammunition items that have passed from R&D into production.
- d. Make the single manager totally responsible for all conventional ammunition production capacity.
- e. Require the services to transfer all funds appropriated for ammunition procurement to the single manager.
- f. Authorize the single manager to review and approve the services' five year defense program.
- g. Assign responsibility to the single manager for DOD-wide integrated inventory and maintenance management.
- h. Designate the single manager as holder of the ammunition in the wholesale inventory.
- i. Require the single manager to apply the principles of vertical stock management for inventory management.
- j. Direct the Army to assign the project manager for production base modernization and expansion to the single manager, after the single manager's organization is strengthened.

6. Department of the Army Inspector General Conventional Ammunition Special Review (CASPR), July 1980.

The Army Chief of Staff selected the Inspector General as a non-proponent agency, to conduct a review of conventional ammunition. This action was taken because of mounting evidence to support the existence of some fundamental problems throughout the conventional ammunition system with the potential to impact seriously on the Army's readiness posture and the nation's mobilization capability.

In their report, the CASPR team stated that during the course of the review, it became apparent that organizational issues lay at the root of virtually every systemic problem identified. They reported that there was no single office or agency in charge of managing or coordinating the overall conventional ammunition system and this resulted in a lack of continuity, some duplication of effort and the appearance of inadequate coordination.

The CASPR team found that five years after the assumption of SMCA responsibilities, OSD had still not provided definitive guidance to the services. Consequently, the Army had not yet published a charter which established requisite authorities and responsibilities within its own structure. The effects of these delays in SMCA implementation were seen in the continued development of conventional ammunition outside the SMCA influence, the proliferation of production facilities and manufacturers, and also the generation of multiple contracts for production of relatively small quantities of ammunition.

The review also noted that placement of the SMCA within the Armament Materiel Readiness Command (ARRCOM) contributed to a low level of participation by the other services. The SMCA was simply operating at too low a visibility level.

Another major finding noted that the lack of definitive DOD guidance for complete SMCA implementation caused the ammunition community to proceed cautiously and avoid organizational change. The Army also did not take the initiative to proceed with SMCA implementation within its own authority or to consider internal organizational changes.

The final major organizational finding stated that in the past ten years the Army had undergone major reorganizations to improve materiel management; however, the resulting functional management structure and the consolidation of ammunition and weapons responsibilities has caused problems in ammunition management. As a result, the CASPR team recommended that a detailed review of the current Army Materiel Development and Readiness Command (DARCOM) structure be conducted for the purpose of reorganizing munitions into a separate command. This command would be responsible for all research, development, production, procurement, and appropriate logistics and life cycle support.

7. General Accounting Office Report, "Adjustments Recommended in Fiscal Year 1982 Ammunition Procurement and Modernization Programs," June 1981.

In this report GAO followed up on the status of DOD actions to implement earlier GAO recommendations about the single manager for conventional ammunition. This was in addition to evaluating the services' fiscal year 1982 ammunition budget requests.

In their report, GAO found that few changes had been made since the 1979 GAO report. They found that the most notable change was the Air Force's agreement to give the single manager information about its conventional ammunition inventory. However, this was well short of the recommendation that a national inventory control point be established. GAO also found that the Air Force, Navy and Marine Corps had finally assigned personnel to the single manager's organization and that the Army had placed the Munitions Production Modernization and Expansion Agency under the control of the single manager.

These changes aside, GAO reported that little further progress had been made to strengthen ammunition management. The actions needed to provide central control over procurement, production and inventory management had not been accomplished.

9. U.S. House of Representatives, Committee on Government Operations Report, "Defense Department's Failure to Properly Manage Conventional Ammunition," March 1982.

In this report, resulting from several months of staff investigation and a subcommittee hearing, the Government Operations Committee found that DOD had failed to complete implementation of the single manager for conventional ammunition due to opposition by the services. The report states that the services still maintain almost total control over their ammunition. The result is that maintenance suffers, and economies in procurement, storage, and transportation are foregone. Most importantly, however, the Committee concluded that decentralized ammunition management as it currently exists does not provide the necessary control needed for effective wartime management.

The report contained five recommendations as follows:

a. The Secretary of Defense should issue a new directive to centralize management of ammunition. The new directive should place all conventional ammunition inventories under the control of the single manager. The single manager should be given authority to procure, maintain, reutilize and distribute conventional ammunition. The Air Force and Navy should be required to relinquish those functions that duplicate or conflict with the responsibilities of the single manager.

b. The Secretary of Defense should consider establishing a central agency for conventional ammunition within DOD, if the services fail to implement the new directive.

c. DOD should adequately budget for the care and maintenance of conventional ammunition.

d. DOD should use less expensive packaging for training ammunition.

e. DOD should establish a uniform accountability system for its conventional ammunition.

CHAPTER I

FOOTNOTES (Pages 1-13)

¹U.S. Congress, House, Committee on Government Operations, Subcommittee on Legislation and National Security. Defense Department's Failure to Properly Manage Conventional Ammunition, Hearing (Washington: U.S. Government Printing Office, 1982), p. 4.

²Ibid.

³Ibid.

⁴Ibid., p. 5.

⁵Ibid.

⁶Ibid., p. 6.

CHAPTER II

ELEMENTS OF MUNITIONS MANAGEMENT

Some of the major functional elements of conventional ammunition management are requirements determination, funding, production, inventory management and ammunition maintenance. Although there are other elements associated with munitions management, these components are deemed critical to the subject. This chapter reviews each of these elements from the viewpoint of how these functions are accomplished today and identifies both strengths and weaknesses in the present management organization.

Requirements Determination

The determination of ammunition requirements, which affects the total allocation of Defense resources, has been of concern to Defense and individual service managers, as well as Congress, for a number of years. Several developments have recently contributed to an increased interest in management's handling of ammunition requirements. At the forefront of issues is heightened Congressional concern over perceived deficiencies in how DOD is resolving the Nation's ammunition problems. Congress has not been hesitant to criticize the Department of Defense for its lack of timely response in initiating programs which Congress, GAO and DOD have identified as necessary to foster efficiencies in ammunition management. The primary munitions sensitive issue before Congress, at present, is the consolidation of individual Service ammunition programs under a Single Manager for Conventional Ammunition (SMCA). The cost savings accrued under centralized ammunition management, to date,

have proven the value behind this concept. Inherent to any study of ammunition management is the necessity to include an evaluation of Service determination of requirements.

Before we can review Service ammunition requirements determination it is incumbent upon us to briefly address the tenets of some of the players in this arena. Despite the virulent rhetoric emanating from many quarters it is an indisputable fact that regardless of the number of personnel under arms and their level of training, the number, type, and condition of the equipment, it is impossible to prosecute a war without adequate quantities of the right types of ammunition.

One finds, without really being able to determine why, that there is considerable resistance to those individuals who advocate the procurement, management, and maintenance of an adequate ammunition stockpile. These arguments tend to fall into three categories:

1. As a family must live within their budget, so must the Armed Forces live within Congressional authorizations. Therefore, the tradeoffs made by the different branches of the Service which result in an inadequate ammunition stockpile are realistic; and who are we to question their judgments? The key point in this approach is that the dissenters readily admit that stocks are insufficient to meet requirements.

While it is recognized that tradeoffs must be made; the question as to what level of inadequate ammunition stockpiling must be established, which is acceptable to satisfy national security objectives, remains unanswered. It appears as budgeting constraints became more severe that the solution has been

to reduce requirements. There seems to be a disconnect between reduced stockpile requirements, from 180 to 90 days or less, while time to reach mobilization production levels for some munitions are forecast to be two years. This is without a corresponding decrease in the threat. It is apparent that tradeoffs between systems and sustainability, or among the various aspects of sustainability, will continue to create serious mismatches within the Armed Forces. The issues that must be resolved are what are our requirements and to what levels must stockpiles be built to insure that the United States can successfully fight a war until production catches up with ammunition expenditures.

2. The second category centers on the argument that it would be extremely wasteful to procure the levels of ammunition required to fight a conventional war. The basis for this approach is the contention that ammunition purchased today will rapidly become obsolete with advancements in technology; thus, adding an unaffordable burden on the American taxpayer. This idea in and by itself is untenable in that it fails to address the threat and if we carry this idea forward the only conclusion one could reach is that nothing should be purchased since something better will come along tomorrow.

There is also the inescapable fact that the weapon systems are on hand which the United States intends to employ should the Nation become engaged in hostilities. These systems are utterly useless without ammunition.

If we don't need the ammunition, we certainly cannot justify the Systems which when combined with ammunition and personnel produce an effective deterrent or a war fighting capability should deterrence fail. Clearly the United States has not pursued this strategy. Since it is a given premise that

resources shall be expended in the search for national security; then the only question which remains is how much? The only answer to be tendered is that level of expenditure which most effectively attains national security objectives within the mandates of the American people. It should be extremely interesting to observe anyone attempting to explain, to the Nation, just how Weapon Systems without adequate munitions are to effectively accomplish their mission.

3. The third category includes those individuals who claim that the Armed Forces have enough ammunition. This argument begs a question. What then is all the commotion about? No matter how we approach this point of view, it is obvious that there is a need to determine who is right--perhaps neither--perhaps it is unimportant who is right. If DOD, the Services, and Congress have yet to come to grips with the determination of the Nation's ammunition requirements then it is well past the time when something must be done. Suffice it to say that the authors found it impossible at the DOD level to even approximate how much ammunition is on hand let alone determine its serviceability. There were simply too many conflicting facts to accurately determine but one basic theme. There is not enough ammunition to carry the Armed Forces from D to P. Another solution to shorten the time from D to P is to invest in the ammunition production base which will facilitate a quicker mobilization response. Although this approach is considered as a necessary step, it cannot in itself, solve current ammunition shortages.

Therefore, it is of paramount importance that a close examination of ammunition requirements be undertaken. It is the purpose of this section of the report to offer a solution on how to accomplish this much needed review of ammunition requirements.

Regardless of whether one supports the long war or a short war philosophy, it is a recognized fact that in contrast to previous wars, success will depend on forces in being when the war begins, and not, as in past conflicts, on prolonged mobilization after the start of hostilities.

But if war does come again to the United States and it is protracted, there will be little consolation in the knowledge that the Nation was well prepared to fight a short war. It would be sad indeed to reflect on this period in the Nation's history and realize that more could have been done, but was not done, to assure a sustained war-fighting capability. Rather than relearning the lessons the United States learned in Korea or Imperial Germany learned in the First World War, United States leadership must take advantage of this period of peace and take positive actions to assure preparedness to fight America's next war.¹

Effective guidance on national security objectives is fundamental to the requirements process. The President determines national security objectives on the basis of advice provided by the National Security Council, Department of State, Department of Defense, Presidential advisors, and other Government agencies. The determination of national security objectives is just the first obstacle to be overcome in the determination of requirements. The Nation's leaders need to make firm decisions on matters that are extremely unpredictable, such as enemy intentions, capabilities, technology, and availability of resources. Military requirements also have to be balanced with other national objectives. A major problem exists in that there is a serious lack of strategic planning for ammunition mobilization. Although a great deal has been written on the subject, little has been done on how to implement strategic plans into ammunition production.

The Department of Defense planning, programming and budgeting system (PPBS) is the foremost management tool used to cope with the requirements and resource allocation tasks. The end result of the PPB system is a Defense budget that presents the requirements against which Congress is requested to appropriate the needed funds. PPBS functions as the process where mission needs are identified, matched against resources, reviewed, and translated into budget proposals. The underlying theory is that the strategy upon which requirements are determined is based upon consideration of the threat.

The planning cycle begins in August and encompasses the upcoming Five Year Defense Program (FYDP) plus a ten-year extended planning period. The Joint Strategic Planning Document (JSPD) is prepared by the Joint Chiefs of Staff (JCS) and is perhaps the most important input to the planning process. The JSPD provides a comprehensive military appraisal of the threat, a statement of the recommended military strategy, a summary of JCS planning force levels, and risk assessment associated with various options as well as other information. Five months later, after a great deal of discussion among the major participants, the planning phase ends with the issuance of Defense Guidance by the Secretary of Defense in January. The Defense Guidance document contains the Secretary of Defense directions for developing the Defense budget.

The programming cycle is begun by the Services and the Defense agencies following the directions set forth in Defense Guidance. During the programming phase, available dollars are matched against the most critical needs and a five-year resource proposal is developed. Program objectives memoranda (POM's) are the outputs. Although each Service follows a somewhat different procedure in arriving at the final version of their POM the procedures are

close enough to generalize. As the Services and Defense agencies develop their POMs, the OSD staff develop issue papers presenting their views and at times challenging positions and data. POM reviews are conducted about midway through the programming cycle where the JCS express their views of POM submissions in the Joint Program Assessment Memorandum (JPAM). The Defense Resources Board (DRB) makes a final review of the POM submission. The DRB membership includes OSD staff, the Service secretaries, and the OMB. Service chiefs are also invited to a number of DRB meetings. The DRB functions as the Secretary of Defense corporate review body, or its Board of Directors. It reviews the PPBS process and advises SEC DEF on issues, as well as forwarding tentative decisions.

It is imperative we understand the budgeting phase goes hand in hand with the programming cycle. POM's establish dollar amounts that form the base for the preparation of budget estimates. Adjustments are continually made in budget estimates as the POM's are modified during the review process.

The programming phase ends with the publication of the Program Decision Memorandum (PDM), which are directives to the Services. The PDM documents are the means by which the Secretary of Defense issues decisions resulting from the review of Service POM's to each military department and Defense agency.

There are certain drawbacks to PPBS. The most serious is that long term planning is extremely difficult since budgeting action on nearly all Defense programs is on an annual basis. This forces numerous revisions in the PPBS process since Congress holds the purse strings and makes the final determination on the level of Defense spending. Additionally, Congress has, in recent years, increasingly entered into decisions of what quantities of military equipment and supplies will be purchased.

Mismatches evolved, not only between stated U.S. policies and the current capabilities of the forces to implement these policies, but also between policies and planned longer-term capabilities. In effect, over the past few years, DOD traded near-term readiness for long-term investment within the relatively constrained Defense budget projections. The problem is, of course, that tomorrow's objectives expand rather than contract, threats outpace our own efforts to deal with them, and the Five Year Defense Plan never provides the promised resources.²

Although various measures have been undertaken to make JCS planning more meaningful to PPBS, it still does not mesh as well as DOD would like. This is because plans are primarily oriented to meet the threat while PPBS is based on resource availability. Since requirements to implement the strategy are usually greater than available resources, planners are always confronted with fiscal restraints on forces.

Each Service establishes its ammunition requirements as an integral part of the POM process. Specifically ammunition fits into FYDP Program 2, General Purpose Forces. Ammunition should be a major factor in the computation of force structures to meet national security objectives, but it nevertheless is buried deep within individual Service POM's. This leads to very low visibility and is a part, rightly so under current procedures, of the system of tradeoffs each Service must make. The major drawback to the current system is that each Service calculates its own ammunition requirements, with tradeoffs incorporated, and there is no single voice to represent the overall impact of individual Service decisions. Without an advocate to present to the Department of Defense the total ammunition picture, requirements are offered piecemeal and therefore, fail to give a coherent view of the impact ammunition has on force structures relative to national security objectives.

The SMCA has made a significant breakthrough with the development of the Integrated Five-Year Conventional Ammunition Procurement Plan (ICAPP). The ICAPP is the vehicle wherein the SMCA comments on the Military Service's Five-Year ammunition procurement plans and with the assistance of the Military Services, prepares an SMCA integrated five-year defense ammunition procurement plan for use by the OSD staff during the POM review process. The primary objective of ICAPP is to consolidate individual Service procurements thus insuring that they are phased and balanced. ICAPP allows procurement program alignment and balance to achieve economical production runs which helps in maintaining a war production base. Requirements are also screened to smooth out production line starts and stops which add to costs. In addition, cross-leveling of assets between the Services prevents uneconomical procurements. The greatest limitation to ICAPP is that it is Service generated; therefore, it represents individual requirements without presenting an overall view of total ammunition needs.

To present a comprehensive view of Defense ammunition requirements, we feel it is vital that needs receive greater visibility. We recommend that the Military Services establish ammunition requirements based upon Defense Guidance and present these needs to a single agency for consolidation. This agency would be the advocate for submission of a separate POM, for Conventional Ammunition.

This agency would then be responsible for insuring that ammunition requirements are considered as part of the military force structure and the impact of these decisions are married to national security objectives. There can be no doubt that as budgetary decisions force realignment of the ammunition POM that

tradeoffs will have to be made. The POM process provides an excellent vehicle for reconciling tradeoffs. As noted earlier, the FYPD never provides the promised resources. A separate Ammunition POM would preclude the tendency for each Service to push ammunition procurements into the 4th and 5th year of their POMs, which never materialize. In addition, it would help smooth out the peaks and valleys in ammunition production. It is necessary to emphasize that we are not recommending that the Military Services become divorced from ammunition requirements determination. Each Service must decide its own ammunition requirements relative to the force structures which are determined by the Department of Defense. Therefore, during the ammunition POM process, it is absolutely necessary for extensive coordination between the ammunition agency and the individual Services to insure that each Service is a part of the process. The greatest single benefit that is realized from relieving the Military Services of processing ammunition as part of their POM comes from the increased visibility of the total ammunition picture prior to Service tradeoffs. This will allow the Department of Defense the opportunity to view ammunition requirements in proper context; the impact of ammunition on force structure effectiveness.

Perhaps Carl von Clausewitz said it best--

If when political objects are unimportant, motives weak, the excitement of forces small, a cautious commander tries in all kinds of ways, without great crises and bloody solutions, to twist himself skillfully into a peace through the characteristic weaknesses of his enemy in the field and in the cabinet, we have no right to find fault with him, if the premises on which he acts are well founded and justified by success; still we must require him to remember that he only travels on forbidden tracks, where the God of War may

surprise him; that he ought always to keep his eye on the enemy, in order that he may not have to defend himself with a dress rapier if the enemy takes up a sharp sword.³

Funding

Funding is tied directly to budgeting, the third phase in the PPB system. The Program Decision Memorandum is the basis for budget submissions; or the annual budget sets forth the financial requirements necessary to support Service programs approved under the PDM. At the end of the PDM process, programming is complete and budgeting actions begin. The PDM, therefore, determines the overall size of the Service budgets, as modified by fiscal guidance of the Assistant Secretary of Defense (Comptroller). A major portion of the budget is confined for the determination of how a predetermined total will be divided among the different programs within the Military Services. To put it another way, fiscal constraints drive force levels; thus, strategy and requirements. Is this not the way it has normally functioned since the Armed Forces usually are resource constrained during peacetime?

There is little doubt that late-breaking policy or strategy changes may cause the President or Congress to alter resource priorities. With the shortage of time, this makes it extremely difficult to coordinate to the degree as was previously available earlier in the PPBS process.

Funding for POM ammunition authorizations are the direct responsibility of the respective Military Services. The SMCA receives funds, from the individual Military Services for those ammunition items which fall under the control of the SMCA. Funds transfers are to be completed within 60 days provided that the Service does not notify the SMCA otherwise. The end result

is that each branch of the Military Service has control over the dollars it shall expend on ammunition. This has, unfortunately, provided the Services with a slush fund to use as deemed necessary. The discretionary use of these monies has been the norm vice the exception. In summary, the sum total of current procedures has been reduced funding for conventional ammunition.

The SMCA controls the Conventional Ammunition Working Capital Fund (CAWC),. The Fund was officially established in October 1981. It consists of all ammunition industrial stocks owned by the Services which were capitalized into the Fund and are valued in current dollars. The actual cash, however, is acquired through advance and progress billings against accepted orders from the Services. Unfortunately, a serious drawback also exists in that the SMCA lacks "contract authority" under the Budget Reform Act of 1974 (Public Law 93-344) which prohibits the use of contract authority for stock funds established after that time. This severely restricts further cost savings.

What we propose is that following approval of the agency POM, for conventional ammunition, funds allocated by Congress go directly to this agency. Although this somewhat reduces Service flexibility, it will nevertheless provide the resources for accelerated procurement of ammunition. The establishment of a separate ammunition agency will also provide for greater visibility of the overall ammunition industrial base and stabilization of modernization programs. By necessity, the demand upon production facilities, to fulfill ammunition orders, will lead directly to an expanded industrial production base. The basic intent is to relieve the Military Services of the temptation to reallocate ammunition monies to other, more glamorous programs. The procedures under which the Military Services shall acquire ammunition

should be relatively easily reconciled through the process of POM allocations. This will also provide for greater expansion of management authority over conventional ammunition. There can be little doubt that the funding proposals presented herein are extremely controversial. Controversy is not the issue let alone our objective. Subjective judgments are never considered objective but stand on their own merit.

Let us not hear of Generals who conquer without bloodshed. If a bloody slaughter is a horrible sight, then that is ground for paying more respect to War, but not for making the sword we wear blunter and blunter by degrees from feelings of humanity, until someone steps in with one that is sharp and lops off the arm from the body.⁴

Inventory Management

Currently, there is no single inventory control point for conventional ammunition. In fact, the single manager plays a rather limited role in management of the total inventory for the various services. With the retention of inventory management, by the Air Force and the Navy, an additional management layer was added with the implementation of the single manager concept. A 1975 concept study concluded that all elements of integrated material inventory management should be accomplished through a single National Inventory Control Point. The elements included were: catalog directions, requirements aggregation for all services, procurement direction, distribution management, maintenance direction, and material utilization. Resistance to this concept emanated from the Air Force and the Navy based on the notion that such a system would undermine support to operational commanders. The single manager, as the proponent of a single inventory control point is convinced that

efficiencies would result and that the demands of a wartime environment could be better met with a National Inventory Control Point.

Under the present single manager system, each service still maintains its own inventory control point. The difference now is that the individual service managers can only fill requisitions from available retail stocks. If sufficient retail stocks are not available, then the item managers refer the requisition to the single manager who then fills from wholesale stocks. This results in double handling of paperwork, and as outlined in a GAO report, adds 6 days to the process.⁵ We learned that SMCA initiatives have reduced this time to an average of 1.8 days. Wholesale is currently designated as that ammunition of SMCA storage and production facilities in the United States and the remainder designated as retail. This situation results in lack of total management capability of over 40 percent of the ammunition inventory with the obvious lack of overview of the assets and their locations. This system with its duplications and attendant inefficiencies frustrates the management of this total inventory and results in involved bookkeeping when assets are transferred from one service to another. All three services have different systems accounting for the same ammunition. The systems are not compatible and produce different data from the same inventories.⁶ Information gained from field visits indicate that the Navy had never conducted a complete inventory of stocks but was in the process of doing so. There is also evidence that an informal system of "getting what you need" between the services has occurred over the years which helps make the system work albeit with attendant inefficiencies. Various studies have shown large discrepancies in inventory amounting to millions of dollars. Such findings have obvious implications to the efficient management of a high volume, costly resource.

We learned in our interviews and contacts with Service munitions representatives that the individual services, to include the Army, are very sensitive about the establishment of a National Inventory Control Point. Provisions have been made for each of the services to provide data on service owned, common, retail assets by quantity facility location, and readiness condition to the SMCA. While inventory records of wholesale ammunition at all storage locations is accomplished on a quarterly basis with a high degree of accuracy, there is no documentation that the total inventory, wholesale and retail, has been reconciled accordingly.⁷ However, the contention from the SMCA is that, retail asset visibility and asset stratification data currently provided for within DOD negates the need for a NICP.

Maintenance

Conventional Ammunition Maintenance is subdivided into two categories, major and minor maintenance. Minor maintenance normally includes cleaning, painting, repackaging, restenciling, and derusting. Major maintenance normally includes renovation, conversion, modification, reclamation, refurbishment, and remanufacture of serviceable and unserviceable ammunition.⁸ The degree of maintenance required for ammunition is dependent on the extent of physical deterioration detected by actual inspection or by noting malfunctions of similar ammunition items during use or testing. Periodic inspection of ammunition is necessary to detect as early as possible signs of deterioration so that action can be taken to prevent serious degradation.

Responsibility for performing and funding the storage, surveillance and routine maintenance functions rests with the organization having physical custody of the ammunition. Currently, the single manager is responsible for

maintenance of ammunition in the wholesale inventory and the services are responsible for funding its renovation. This split responsibility has as one of its effects, less than an optimal degree of effectiveness in maintaining ammunition assets.⁹ Studies have recommended a single point for maintenance activities so that workloading at depots would be more economical and efficient. For example, under the current system, one service could renovate its inventory in one year while another service may lack funds or choose not to renovate in the same year, thus creating condition inequalities in the same stockpile of ammunition.

The rationale for a National maintenance point is the same as that for a NICP. The opposition to both from the individual services is based on loss of control and operational flexibility.

We learned that initiatives have been forwarded to address shortcomings in maintenance of ammunition assets, however, the situation is still hampered by a lack of information provided to a single point in DOD. The use of the Five Year Maintenance Plan and existing organizational entities have made some progress towards increasing efficiencies. The basic issue seems to be the validity of the data provided the SMCA on the total inventory.

Production Base

The ammunition production base involves the public and private sectors of the industrial production base. The base consists of government and privately owned plants, plant equipment packages (PEP's) and mobilization agreements between the government and potential wartime producers.

Production facilities consist of government-owned contractor-operated (GOCO), government-owned and government-operated (GOGO) and contractor-owned contractor-operated (COCO) facilities. The production facilities for a full ammunition round are not collocated. The metal parts are purchased at either a COCO or a GOCO facility. The chemical processing of propellants and explosives and the load assemble and pack operations are normally performed within GOCO and GOGO facilities.

Private industry is reluctant to invest heavily in capital equipment required for ammunition equipment because there is virtually no commercial market for the product. Consequently, the government has provided the plants for manufacture of ammunition. As noted previously, following World War II a significant number of government ammunitions plants were deactivated and dismantled. When the base was reactivated for Korea and Vietnam signs of deterioration were evident.

A modernization program was begun in 1971 to remedy the deteriorating base.¹⁰

The Plant Equipment Package (PEP's) are the second component of the ammunition industrial base. The PEP's represent the production expansion capability of the government owned base. These packages are idle at government or private industrial locations awaiting mobilization. The inactive PEP's are a sizeable manufacturing potential; however, signs of serious deterioration and lack of modernization casts doubt on its usefulness as a mobilization asset.¹¹

The third segment of the ammunition production base is the mobilization agreements between the government and potential wartime munitions producers. These agreements are known as "1519's"; the name derived from Department of Defense Form 1519 upon which the agreement is recorded. Under these agreements, which are not legally binding, a manufacturer agrees to produce a specified quantity of munitions at an agreed upon rate after an emergency has been declared. There are approximately two hundred planned producers involved in mobilization planning for the production of these items through execution of approximately 1000 agreements.¹²

The preceding discussion identified the munition industrial base as consisting of government and private owned manufacturing capability, the store of government owned manufacturing equipment in identifiable plant equipment packages and agreements with private industry to augment the government's production capability. The munitions industrial base is not without shortcomings and the next section discusses some of these problems.

The active ammunition plants, which comprise the nucleus of the peacetime manufacturing capability, present a deceptively positive picture of the present condition of the munitions industrial base. The proficient performance of the modernized active production lines overshadows and hides the condition of the real property which contains the equipment and the condition of the Industrial Plant Equipment (IPE) which is presently inactive. The inactive portion of the base is being neglected as in previous peacetime eras and is showing signs of serious deterioration. Even newly modernized lines, if not activated to support current production lines, begin to deteriorate if maintenance money is not provided for upkeep.¹³

The Army has recognized the requirement to keep unused production facilities in a proper state of readiness. Projects were specifically initiated to redress these maintenance deficiencies and clear up overdue maintenance requirements. Funding support for these projects has fallen short. The annual funding deficits, going back as far as 1970, has resulted in a maintenance backlog at the inactive ammunition plants.¹⁴

The foregoing discussion provided a general overview of the problems with the active and inactive government owned munitions manufacturing facilities. The next section provides a discussion of the problems with the government owned Plant Equipment Packages (PEP's).

The PEP's, which are held at private industry locations, are an industrial readiness asset against a future mobilization requirement. A 1975 Department of Army study estimated that of the existing ammunition PEP's only 31 percent would be useable without extensive repair. The remaining 69 percent would require repair or replacement before useable for production. On-site inspections by the Army verified the results of the study.¹⁵

A modernization plan was developed to improve the condition of the PEP's. The plan includes the rehabilitation and replacement of industrial equipment in commercial plants. The program has not been fully funded, and full funding in the future is very much in doubt.

The mobilization planning process depends upon the PEP's and agreements between the government and commercial contractors. The agreement consists of a planning schedule which meets a portion, or all, of the government's requirement for munitions. The ensuing "DOD Industrial Preparedness Program Production Planning Schedule" is recorded on a DD Form 1519 and signed by both the government and the contractor.

It would appear that a series of these agreements covering the munitions production to meet our mobilization requirements for a variety of peacetime and wartime contingencies would solve the mobilization problem. In practice the system does not work well.

A shortcoming of the system is that a mobilization decision is required to implement the planned actions. During the Korean conflict and the Vietnam War the nation did not officially mobilize and the DD Form 1519 planning was not utilized. The government adhered to peacetime regulations and invited competitive bids for the procurement of needed defense materiel to the exclusion of many of the planned producers.¹⁶

A second weakness in the system is that the planning agreements are not contracts. As a consequence the contractor is not obliged to perform as agreed, nor is the government required to contract with the planned producer for the items included in the agreement. The government can contract with other sources and industry officials who do not see beneficial results from the planning, participate only superficially in many cases. Additionally, many 1519 production schedules are only valid if industrial preparedness measures (e.g., pre-stocked parts, additional industrial equipment) are initiated. When the government is unable or unwilling to provide funding support for these industrial preparedness measures, the contractors question the sincerity of the government's interest in meeting the mobilization schedules.

The problems with mobilization planning have been recognized and a concept called surge planning has been initiated. Under this Planning Concept, a declaration of national emergency is not a prerequisite trigger. Surge

planning provides for rapid increases in munitions production in order to provide for increased inventories during periods of sustained international tension.

While some surge planning has been done, problems still exist that are similar to the DD 1519 system. According to industrial officials, government investment in long lead time components and specific tools and test equipment is required.

Research and Development

Individual services are responsible for ammunition research and development. DOD Directive 5160.65 states that the services should assign ammunition approved for service use and released for full scale production to the single manager for procurement. Approval for service use and release for production occurs after research, development, and testing. Small quantities are produced initially to assure acceptability and to minimize any adverse effect of design and/or production problems.

The services do not assign new ammunition items to the single manager at time of approval for service use. The services retain responsibility for acquiring production facilities and producing initial quantities to resolve and to validate the technical data package. The items are transitioned to the single manager when the service resolves production and technical problems. The production and procurement programs for service managed research and development munitions is substantial--over 600 million dollars for fiscal year 1981.¹⁷

The services are required to coordinate with the single manager in developing initial production facilities (IPFs). However, the services decide when, where, and how to establish capacity and when to transfer procurement responsibility to the single manager.¹⁸

The services oppose increased authority for the single manager in decisions relating to research and development and establishment of IPFs. The specific objections outlined by the services are:

- (1) Single Manager's facilities are old and technologically obsolete. The services do not want to constrain ammunition design to old equipment and technology.
- (2) Restriction on funds by single manager to establish IPFs would cause delays in the research and development cycle.
- (3) Contractors bid for research and development with the objective of getting follow-on production contracts. If the contractors are denied follow-on production through greater single manager involvement, the contractors may be reluctant to do research and development.¹⁹

Either side of the issue can be argued, however, if the single manager is to perform as a manager of ammunition he must control production and procurement decisions commencing with the establishment of IPFs for new ammunition items.

Functional Summary

The single manager, within the present organizational structure, has limited control over the funding, procurement, maintenance, inventory control and production of ammunition. The SMCA coordinates rather than manages conventional ammunition functions. The previous discussion of the functional

elements of ammunition management clearly indicates that the SMCA does not have the authority to exercise effective management control. An organizational structure beyond the EDCA that provides the single manager with greater authority than his present advisory and coordinating functions in the nation's ammunition program is required.

A strengthened organizational structure should:

- (1) Be involved in determining overall national ammunition assets related to force structure effectiveness and war plans requirements.
- (2) Receive funds directly from DOD for procurement of ammunition.
- (3) Maintain a national inventory control point.
- (4) Maintain a national ammunition maintenance plan.
- (5) Be funded to maintain essential elements of the production base warm.
- (6) Level year-to-year procurements.
- (7) Take advantage of recent developments in ammunition production processes and facilities technology.

With a strengthened organizational structure the single manager can maintain a defense-wide perspective for conventional ammunition. The strengthened organization will be essential during mobilization. The lessons of past mobilization efforts when major reorganizations of the munitions management occurred would not be required again. Time may not permit necessary rapid expansion of the conventional ammunition base to satisfy future mobilization requirements.

CHAPTER II

FOOTNOTES (Pages 15-37)

¹Harry F. Ennis, Peacetime Industrial Preparedness for Wartime Ammunition Production, National Security Affairs Monograph Series 80-7 (Washington: National Defense University, 1980), p. 102.

²Vincent Puritano and Lawrence Korb, "Streamlining PPBS to Better Manage National Defense," Public Administration Review, September/October 1981, pp. 571-572.

³Karl von Clausewitz, On War (Vom Kriege), ed. by Anatol Rapoport (New York: Penguin Books, 1968), p. 137.

⁴*Ibid.*, p. 345.

⁵U.S. Comptroller General, Centralized Ammunition Management--A Goal Not Yet Achieved, a Report to Congress, Report No. LCD-80-1 (Washington: U.S. General Accounting Office, 1979), p. 22.

⁶ *Ibid.*, p. 24.

⁷Letter from J. R. Sculley, Assistant Secretary of the Army (Research, Development, and Acquisition) to The Honorable Jack Brooks, Chairman, Committee on Government Operations, House of Representatives, 18 June 1982, p. 9.

⁸*Ibid.*, p. 8.

⁹Comptroller General, Centralized Ammunition Management--A Goal Not Yet Achieved, p. 25.

¹⁰Ennis, Peacetime Industrial Preparedness for Wartime Ammunition Production, p. 56.

¹¹*Ibid.*, p. 58.

¹²*Ibid.*, p. 60.

¹³*Ibid.*, p. 61.

¹⁴*Ibid.*, p. 64.

¹⁵*Ibid.*, p. 65.

¹⁶*Ibid.*, p. 67.

¹⁷Comptroller General, Centralized Ammunition Management--A Goal Not Yet Achieved, p. 15.

¹⁸Ibid.

¹⁹Ibid., p. 17.

CHAPTER III

TOWARD AN OPTIMAL ORGANIZATIONAL MODEL

Introduction

Effective munitions management is vital to our national security. Yet it is evident that our efforts toward management reform in the past decade have not been fully effective.¹ The relative lack of visibility of ammunition in comparison to the glamour of sophisticated weapons systems may explain in part why this problem has failed to capture the attention necessary for successful resolution. The resistance to change inherent in all large bureaucratic organizations, of which the DOD is no exception, is another ingredient.² Possibly the strongest single factor mitigating against pervasive reform is the natural reluctance of the individual services to relinquish control over a function that is traditionally theirs.³ The result has been only marginal change, a classic example of what some scholars of organization theory have called "incrementalism."⁴ Reform by process of incrementalism may be considered dysfunctional, in regard to vital problems affecting our national defense during turbulent times.⁵ Yet in the absence of some major disaster or dramatic failure, it will be undoubtedly difficult to bring needed revolutionary change to our ammunition management system. It is also evident that there is a great deal of controversy associated with the problem. However, these factors should not deter sincere, non-political, academic efforts to develop a solution.

From a perspective temporarily outside the bureaucracy, this study group views the munitions management problems as largely institutional . . . a problem of organizational theory. This perspective also permits an attempt to develop a more rational and comprehensive approach to munitions management reform--the development of a model organization. The study objective is to design an organization that is functionally optimized to meet the readiness needs of the individual armed services, while achieving a degree of responsiveness which will permit munitions support congruent with the national strategy. A high degree of efficiency and economy can be expected as a natural product of such an organization.

Scope and Methodology

It should be noted at the outset that there must be limitations on the scope and depth of this design effort. Conventional munitions management is an exceedingly complex problem. Because of the limited time and resources available, exhaustive analysis of pertinent areas such as manpower, facilities, and cost is not possible. It is also recognized that by dealing only with the highest levels of the model organization, and only the major issues involved, many important questions will be left unanswered. Nevertheless, it is possible to suggest a broad rational approach to the problem, and recommend an organizational framework that will provide a basis for further study. In the interest of facilitating future efforts to build on this framework, a discussion of design methodology is provided.

Quantitative methods do not readily lend themselves to development of a model organization of this nature. However, cost analysis would ultimately be necessary in evaluating some aspects of the recommended model in comparison to

the current organization, particularly in the areas of personnel, facilities, transportation, and automated data systems. Instead, the model was developed largely through qualitative analysis of the problem and application of common sense principles of organization theory, such as "functional grouping" and "reasonable span of control." Particular emphasis has been placed on the need for: a close relationship between authority and responsibility; clear lines of authority and communication; and clear definition and separation of functional areas of responsibility. These are particularly salient weaknesses of the current organization.

Of the documents consulted, the most useful by far were the recent General Accounting Office report to Congress (November 26, 1979), and the Army's own Conventional Ammunition Special Review Team (CASPR) report (July 1980). Both of these reports contain strong recommendations for reorganization of the conventional munitions management system. Special mention must be made of Volume II of the CASPR report, which contains an excellent analysis and five different options for reorganization, none of which were adopted in the 1981 DOD conventional ammunition management initiatives.⁶

The CASPR reorganization options provide an important departure point. However, the relationship of the CASPR team to the Secretary of the Army's current role as Single Manager must be kept in mind. This relationship is a fundamental constraint on the type of recommendations that could be reasonably considered by the CASPR team. For example, the second CASPR reorganization option consists of what is essentially a joint service ammunition management staff directly under the Secretary of the Army.⁷ It is interesting to speculate on the form this option would have taken had the CASPR team been

chartered by the Secretary of Defense instead of the Secretary of the Army. Finally, the DOD experience in creating the Defense Supply Agency (now Defense Logistics Agency), provides a useful case for study and comparison.

Throughout the analysis and development of the model, conventional ammunition management was considered as an input-output system. Studied in this manner it is apparent that problems of organizational structure cannot logically be divorced from problems of procedure or process. It will therefore be necessary to offer not only a model organization structure, but also recommendations that represent essential processes tailored to that structure--primarily in the area of budgeting.

A Design Orientation

The basic issue which drives any analysis of conventional munitions management is degree of centralization. Other points of controversy, such as ammunition ownership, definition of wholesale/retail stocks, and the need for a national inventory or maintenance control point, can all be ultimately reduced to this central issue.

The individual services have resisted centralization during peacetime on grounds that highly centralized munitions management would not be sufficiently responsive to their unique needs, and therefore readiness would suffer. On the other hand, Congress and the General Accounting Office have approached the problem from a considerably different perspective--that of seeking efficiency and economy in the management of scarce national resources. The Department of Defense, at the Secretary of Defense level, is in the middle--and has thus far taken a laissez-faire approach to the issue.

What is often judged as parochialism by some is in fact simply genuine professional concern for readiness and mission by the services. However, the character of such in-fighting does obscure the central issue itself, which may be perceived more clearly from yet a third perspective--the requirements of national mobilization for the long war.

This study has been performed from that third perspective, in which a coherent national strategy must dictate requirements for mobilization, and the organizational machinery necessary to implement mobilization. This does not mean that readiness, economy, or efficiency are not legitimate concerns. On the contrary, readiness and economy must be of high priority in any approach to munitions management. But, the focus on mobilization for a long war does mean that the suggested model organization must be optimized to provide primary responsiveness to the Joint Chiefs of Staff and Commander-in-Chief. In short, it is the study group's view that conventional ammunition must be considered a vital national asset, to be produced and distributed through theater commanders according to the priorities established by the national strategy and as articulated in JCS and theater war plans. For the individual armed services do not fight wars--joint forces directed by the JCS, through the theater commanders do! This represents the so-called "purple suit" perspective--the only concept of war fighting logically viable. Our logistics support must be tailored to fit this concept of war fighting. In the case of conventional ammunition it is not!

From the "purple suit" perspective, it is conceivable, even likely, that production, allocation, and transportation decisions made congruent with the national strategy may seem unpalatable from the more narrow point of view of a

single service or even a theater commander leading forces in an area of lesser priority. Yet our military policy must be consistent with the national strategy, especially as weapons grow more expensive. The defense establishment has too often been accused of dividing up the money first, and then attempting to develop a strategy to fit what has been purchased.⁸ Considering problems of the sort found within our current munitions management system it is no wonder that there is considerable pressure to reform the system from outside the defense establishment. From the perspective of mobilization to support a coherent national strategy, the argument for greater centralization is powerful. The experiences of World War II provide important examples.

Arguments for Centralization

President Roosevelt's decision to provide large quantities of war material to Great Britain was undoubtedly unpopular with those who perceived the low state of material readiness in the armed forces as a problem of the gravest extreme immediately prior to World War II. Yet with the advantage of hindsight, few today would question the wisdom of his "rule of thumb," announced in November 1940, that American war production would be divided fifty-fifty with England.⁹ This decision makes little sense if perceived solely in the light of individual service readiness or efficiency. Yet it is consistent with President Roosevelt's broad national strategy of helping to stiffen British resistance in order to buy time for mobilization of the U.S. will, industry, and economy. Likewise, the Anglo-American grand strategy announced in January 1941, that "only the minimum of forces necessary for the safeguarding of vital interests in other theatres should be diverted from operations against Germany"

--provided little comfort to those fighting a grim holding action in the Pacific.¹⁰

By July 1942 the most senior United States military staff had itself become strongly divided along land war/naval war lines, with General Marshall representing the land war (Europe first) faction, and Admiral King representing the naval war (Pacific first) faction.¹¹ President Roosevelt alone possessed sufficient power and influence to not only maintain the direction of the allied grand strategy, but as well restore the necessary harmony and unity of effort to the supreme U.S. military staff.¹² Certainly no one would accuse the consummate professionals, General Marshall or Admiral King, of parochialism, inter-service rivalry, or seeking to further their own personal interests at a time of grave national danger. Both simply differed on how to most effectively prosecute the war, given the limited U.S./allied resources of the moment. Their differences were a reasonable outcome of contrasting experiences in education and military service. Both probably believed in the inherent strategic supremacy of the arm they had been trained to serve. These differing strategic views were also reflected in the logistics arena, as the individual services often competed in the marketplace for raw materials and production capacity.¹³

Both the U.S. Army and Navy had independent ordnance departments in World War II, which often made totally unrealistic requests from the standpoint of available raw materials and production base.¹⁴ Neither service demonstrated the necessary economic expertise within its staff to rationally integrate national production planning, strategy and economic reality.¹⁵ Ultimately, this problem was solved in the United States by creating a succession of

administrative agencies above the service level to rationalize competing priorities with the national strategy. By 1943 the Office of the War Mobilization and the Controlled Materials Plan emerged as necessary strong vehicles of central control, to ensure production and resource allocation priorities consistent with long term strategy.¹⁶

The other belligerents of World War II faced the same problem, for the total nature of the conflict engulfed entire populations and economies. Even totalitarian Nazi Germany was forced to make fundamental changes. When Hitler was turned away from his Blitzkrieg strategy in 1941 by his failure to defeat Britain, mobilization of the German economy and industry for the long world war became imperative. Even though the German army had an economic planning staff, as well as weapons procurement agencies like U.S. Forces, centralized planning and control above the service level became necessary.¹⁷ Prior to the advent of centralized planning and control under Fritz Todt, and later Albert Speer, the Germany Armed Forces also competed unrealistically for resources and production base. The necessary change in German strategy also dictated that Hitler create a position of power above the armed forces to rationalize demands for equipment, raw materials and production capacity.¹⁸ Given the necessary power and administrative machinery, Albert Speer was able to achieve remarkable results.¹⁹ By 1944 Germany was producing far greater quantities of equipment and munitions than ever before, in spite of the interruptions caused by massive allied bombing attacks.²⁰ Similar examples from the World War II experiences of other nations such as Great Britain could be addressed as well. Alan S. Milward's analysis in War, Economy and Society, 1939-1945, is an excellent summary, which provides an in-depth comparison of the belligerents. The pertinent points for this study are as follows:

(1) The consumption caused by protracted modern war is likely to involve entire populations and economies.

(2) Determination of what should be produced, and to whom it is distributed, must be dependent on a coherent strategy because of finite limitations on resources and transportation.

(3) The individual branches of a nation's armed forces, by virtue of role, experience, and organization, are neither properly equipped nor intellectually disposed to determine overall strategy, production levels, and the impact on the national economy.

(4) A strong central controlling authority, with the proper organizational machinery, is necessary to rationalize the competing resources and national strategy.

This strong central controlling authority may take many forms and will probably require a combination of agencies. Specifically chartered planning boards have been favored by the U.S., but such administrative machinery takes a great deal of time to evolve and perfect, as our experience in World War II has shown.²¹ But much of the advantage of time that favored the United States in World War II will be absent in the future.

The recent wars in the Middle East have dramatically demonstrated the greater intensity of violence which is the legacy of modern technology, and which results in higher rates of equipment and ammunition consumption than ever before. Furthermore, the oceans which insulated us from the immediate threat in World War II no longer provide insurance for our industrial base, and indeed complicate rapid resupply of our forward forces. Our potential enemy consistently maintains his armed forces at a much higher proportionate

readiness level than the axis belligerents prior to World War II. It is true that we have adopted measures to offset these developments, such as a forward defense in Europe, NATO, and a much stronger level of active U.S. Armed Forces than prior to World War II. However, as discussed in previous chapters of this study, in the area of conventional munitions we seem to be woefully unprepared to sustain those forces in the field through all but the earliest stages of an intensely violent conflict. Of additional concern is our ability to supply our allies with necessary munitions, a vital strategic factor which has apparently received little attention.

If it is accepted that the changing strategic balance has again brought the long war into the realm of possibility, then it should likewise be accepted that we must create the necessary administrative machinery and management system to supply our forces, and those of our allies, with ammunition for the long term. This must be accomplished prior to hostilities!

Our inability to thus far integrate ammunition stockpiles and production into a coherent national strategy may reflect the belief that the ingenuity of the American government/industry team will allow us to somehow "muddle through" as we have in past conflicts. Those who subscribe to this belief may not have fully considered the impact of our shrinking industrial base and the structural changes which are currently shaking our economy. The boom-bust cycle of ammunition management through World War II, Korea, and Vietnam illustrates the consequences of fragmented management between wars.²² In contrast, the success of DOD level ammunition management during the war in Southeast Asia has illustrated the need for a national level advocate for

ammunition.²³ Yet there are those who continue to question not only the need for centralized ammunition management, but the potential effectiveness of such an approach as well. The DLA experience, a successful attempt to resolve a similar problem, is instructive in this regard.

On 1 January 1962 Secretary of Defense Robert McNamara created the Defense Supply Agency--later the Defense Logistics Agency. The purpose of the new agency was to resolve problems of duplication, inadequate standardization, and waste by centralizing procurement and supply of defense items common to two or more of the services. This category of supplies included an inventory of more than 1.02 million separate items. Opponents of centralized supply felt that the above problems could be corrected without a separate logistics agency (as many today feel about similar problems of ammunition management).²⁴ Many also felt that such a centralized management agency could not provide the responsive support necessary for readiness.²⁵ But during the years immediately prior to Secretary McNamara's move, a compromise approach (single service managers for separate categories of supplies) had been attempted without success.²⁶ The difficulties involved in creating a single agency to manage the supply of such a formidable array of supply items were considerable. The services' reluctance to give up control of their supplies brought the new agency under fire from many quarters within the military.²⁷ Nevertheless, the Defense Supply Agency was able to successfully meet its first full scale test during the Cuban missile crisis of 1962.²⁸ Since then, the Defense Logistics Agency was evolved through the conflict in Southeast Asia and proved the soundness of the concept of centralization.

The case history of the evolution of the Defense Logistics Agency presents a striking comparison to the nature of the ammunition management problem and our efforts to resolve it since 1973. It is also interesting that the arguments used to resist the creation of the DLA are similar in many respects to the arguments offered in opposition to the current issue of centralized ammunition management.

Arguments Against Centralization

A study of the arguments against centralization of conventional ammunition management presented in the available literature reveals that they center around five main points as follows:

- (1) Centralized management cannot be responsive and therefore readiness will degenerate;
- (2) The individual services must own the ammunition they pay for with funds appropriated through their respective POM/budgeting processes;
- (3) Centralization would necessitate a national inventory and maintenance control point, which is unworkable and wasteful;
- (4) A centralized organization would not have the specialized technical expertise to determine requirements, and effectively conduct research and development, etc.
- (5) The current organization for conventional ammunition management, as improved through recent initiatives, is now fully capable of meeting program goals and coordinating with the services to achieve economy and efficiency.

Collectively, these arguments appear to present a formidable rationale against further centralization of ammunition management. But if considered

individually, they are found to be less persuasive. In some cases, they are not at all inconsistent with properly organized centralized management.

As for the first issue, readiness and responsiveness, the specific rationale for concern is not clearly stated in the available documentation--except insofar as it is implied by the other concerns listed above.²⁹ An unwritten concern, but one often expressed in interviews, is that a centralized organization or authority would simply be incapable of the necessary sensitivity to service operational needs. There is also an implied fear that the individual service would not get its fair share of the ammunition resource, and would continually face bureaucratic roadblocks which would inhibit efficient distribution during war. However, those who express such concerns are unable to account for the success of the Defense Logistics Agency over two decades, including a long conflict, in successfully satisfying service operational needs. Moreover, the concern over a fair share of the ammunition resource is illogical in the face of strong evidence that the services themselves often give ammunition a relatively low priority, and perceive appropriated ammunition funds as an available reservoir for other uses. The real issue therefore seems to be control.

The individual services apparently view loss of control over ammunition management as a threat. Yet the history of our involvement in World War II, Korea and Southeast Asia, illustrates that more centralized ammunition control is necessary, and indeed inevitable, in any large scale conflict. The service values regarding the issue of control of ammunition management is clearly reflected in their position on ammunition funding and ownership.

The joint service position on ownership is that ammunition is procured with funds appropriated by Congress for their specific use. Therefore, the services "own" the ammunition and are responsible under the law to insure accountability.³⁰ In addition, the services maintain that appropriated ammunition funds cannot always be immediately transferred to the single manager because of changes in the threat and technology, "or because of a need to rebalance a service's overall expenditure program."³¹ This is simply another means of saying that the services often view appropriated ammunition funds as a necessary budget reserve for other items. It is difficult to appreciate that the threat or technology could change so significantly between the time the POM is submitted in any given year, and the time funds are actually appropriated, as to drastically alter the ammunition requirement. This viewpoint also supposes that a centralized ammunition management organization would be incapable of responding to truly necessary program alterations requested and justified by the JCS or the services.

This concept of ownership is diametrically opposed to the concept of ammunition as a national asset vital to our joint war fighting capability. Under this latter concept ammunition "ownership" has no meaning, for ammunition is distributed to theater commanders according to strategic priority, and to unit commanders according to operational need. A Marine Corps unit engaged in combat, or preparing for crisis should be able to draw ammunition from theater depots regardless of which service administers the depot, so long as the requisition is consistent with the theater commander's operational priorities at the time. The exigencies of combat preclude complicated interservice approval and adjudication procedures, such as our present system provides for.³²

The answer is to eliminate service budgeting and funding for ammunition entirely, and thus defuse the ownership issue. Instead, the services should provide ammunition requirements, by type and quantity, to a centralized management agency that would prepare an integrated ammunition plan and budget. Such an integrated national ammunition plan and budget could be more effectively reviewed by the JCS and Secretary of Defense, and rationalized to be consistent with the national strategy, military policy, and war plans. Perhaps more importantly, the director of such an agency in annually presenting the integrated ammunition plan to the Secretary of Defense and Congress would serve as a national advocate for our total ammunition needs. The requirements for such an advocate should be strikingly evident considering our continuing ammunition problems over so many years. The services have already recognized the need for an integrated ammunition plan.³³ An integrated ammunition budget is simply the logical extension of an already recognized concept. Centralized budgeting and procurement would also necessitate a national inventory and maintenance control point--a concept also appealing from the viewpoint of mobilization needs, but one that has drawn considerable fire from the armed forces.

The coordinated services position on this issue is that the present Single Manager for conventional ammunition can accomplish his mission without a national inventory control point (NICP) and maintenance point (NMP). The services also point out that they already have their own inventory control and maintenance points which perform adequately. They further express the belief that they must retain authority to direct renovation and maintenance, and that an NICP and NMP would be impractical and wasteful.³⁴ This position is

difficult to justify in the face of well documented evidence (discussed previously in this study) that the services have not been able to maintain an accurate inventory of ammunition stocks, nor insure that minimum maintenance is conducted. New procedures established in 1981 are to have insured that accurate ammunition totals are provided to the SMCA. However, more than one authority interviewed clearly expressed the view that the inventory information provided to the SMCA is incomplete. The multiplicity of accounting systems currently in use undoubtedly exacerbates this problem. As for renovation and maintenance authority, available documentation suggests a lack of emphasis to date on necessary funds for manpower and adequate storage facilities to preserve ammunition stocks in a ready state. This condition also suggests that a strong national advocate for ammunition planning and budgeting is required. Nevertheless there is a need for service inventory control points subordinate to any national inventory control point.

Such subordinate control points are required in order to effectively manage the low volume, high technology, specialized munitions, such as guided missiles, which remain under service control. The inter-relationship between these munitions and their more sophisticated delivery systems dictates that their management and support remain under service control. But these requirements do not negate the desirability of a national inventory control point and national maintenance management.

A truly effective system should be composed of both NICPs and individual service ICPs tied together through a dedicated electronic data system to provide redundancy and expedite distribution transactions. Such a system would also increase effectiveness in dealing with those items in short supply

which have been selected for intensive management attention. It is interesting to note that the feasibility of instituting an automated data system to aid interservice ammunition management is already under study (JCAP/CG Standardized Ammunition Computer System Ad Hoc Group Report, "DOD Wide Ammunition Feasibility Study," 20 April 1982). In the final analysis it is difficult to appreciate how effective mobilization planning can be carried out, or how the Commander-in-Chief and JCS can direct our war fighting capability, without knowing what the nation's total ammunition reserves are.

A centralized management system, including a National Inventory and Maintenance Control point, tied to subordinate service inventory control points through a dedicated computer system, would significantly improve our mobilization ability. However, the suggestion of centralized management also brings forth the argument that the single manager's staff would not possess the necessary technical expertise without unnecessarily duplicating large Army, Navy, Air Force, and Marine Corps staff elements.³⁵ This is of course absolutely unfeasible--but need not be a problem if missions and responsibilities are adequately defined.

The joint services, through the Joint Conventional Ammunition Program Coordinating Group, maintain that only the individual armed services are capable of analyzing the threat and developing the necessary doctrine, employment tactics, and sophisticated weapons systems which in turn drive ammunition requirements. This point is unarguable, and from it flows the idea that the services must also be responsible for: research and development; low rate initial production; small volume, high technology items; all systems dependent items; all areas of interface between ammunition and delivery systems; and

decisions to phase out items no longer needed.³⁶ Clearly these areas should continue under service responsibility. But this is not at all inconsistent with centralized management of high volume, low technology items in lot production--the area of responsibility currently defined by charter as appropriate to the single manager.

It should be emphasized once again that the key to effective management of these high volume items should be centralized planning and budgeting based on requirements of type and quantity furnished by the individual services. Under this concept important advantages can be realized if the centralized management organization serves not only to collect production requirements, but also performs a coordinating and facilitating role in the areas of: research and development; low rate initial production; and even some small volume, high technology items needed by more than one service. It would not be necessary to duplicate the large specialized service staffs to perform these functions with benefit. It would be essential, however, to provide some service representatives to fill key positions on the centralized ammunition management staff--to bring in vital air, sea, ground, and amphibious warfare expertise, and to provide each service with a greater voice in ammunition management policy.

The concern over not having a sufficient voice in ammunition management affairs has already been expressed as a criticism of the present SMCA system. Nevertheless, the joint service position is that further centralization is unnecessary, because recent DOD initiatives have provided the SMCA with the tools necessary to effectively do the job.

In a letter (with attachments) of 18 June 1982 to the House Committee on Government Operations, Mr. J. R. Sculley, Assistant Secretary of the Army for Research, Development and Acquisition, explained the improvements made in the current single manager systems with the November 17, 1981 DOD initiatives (DODD 5160.65, 17 Nov 81). As has already been pointed out, there is strong evidence to support the conclusion that considerable problems remain--problems which may be attributed to fundamental flaws in the current organization. A recent memorandum from the Executive Director for Conventional Ammunition to the Secretary of the Army proposing a new charter for the Single Manager for Conventional Ammunition represents an attempt to correct these flaws.³⁷ The military services have already concurred with this proposed charter, which should be expected to offer the potential for significant improvements.

However, a review of the proposed new charter reveals changes that suggest the single manager organization will be even more complex than before, because of increased layering and fragmentation of responsibilities.³⁸ Furthermore, the proposed new charter appears to increase the horizontal distribution of management functions, and still does not come to grips with the CASPR team criticism that there is no one in charge--no overall Director with clear lines of authority and responsibility.³⁹

In short, the improvement initiatives already carried out, as well as those proposed since 1981, represent only incremental improvements, and in some cases even complications, because they do not address the fundamental problem--the very nature of the current SMCA organization itself.

The Study Group Viewpoint

The arguments which favor a high degree of centralization for conventional ammunition management are strong when presented from the perspective of national mobilization needs. The lessons of history dramatically confirm the wisdom of subordinating the individual service conceptions of war fighting to a coherent national strategy. The machinery for logistics planning, administration, and execution must be consistent with the national strategy, even to the extent of denying the individual services totally autonomous control over certain vital assets where necessary. Conventional ammunition is one such vital asset, yet our existing organization for managing that asset remains fragmented, overly complicated, and unresponsive to the needs of rapid national mobilization.

Although the individual armed forces continue to resist further centralization of ammunition management, their arguments fail to come to grips with the reality of the past performance of ammunition management, as well as the shortened time factor and higher intensity of violence which complicates supplying our forward forces in the initial stages of a major war. Further efforts to come to grips with this problem through the application of incremental fixes to the present system will yield only marginal improvements. These "Band Aides" only serve to further complicate an organizational structure and associated process which are basically flawed from the standpoint of mobilization needs.

The optimum solution to this problem is to therefore totally redesign the nation's conventional ammunition management organization, and re-create the planning and budgeting process required to support that structure. The

success of the Defense Logistics Agency in resolving a similar problem has set an important precedent for such a reorganization. The following proposal will lay out the form the new organization and process should take in order to achieve optimum effectiveness in the management of conventional ammunition.

Development of a Model Organization

Proposal

An operating agency of the Department of Defense reporting directly to the Under Secretary of Defense for Policy.

Organization Concept

This proposal represents the establishment of a major DOD agency for the management of conventional munitions, as depicted in Figure 1. Munitions management would be elevated to a nationally prominent position to ensure that it received the appropriate consideration with regard to national security matters. The Director, Defense Conventional Munitions Agency (DCMA) would report to the USD for Policy. Elevating the DCMA to this level would ensure the director had the necessary authority to enforce conventional ammunition policies for the armed forces in all areas where economies of scale can be realized through centralized management of common-use items. It should be noted that RDT&E coordination for conventional munitions has been included within the list of DCMA responsibilities. The matter of RDT&E is likely to provoke some controversy as the individual services correctly claim that munitions development cannot logically be divorced from simultaneous development of delivery, guidance, and fire control systems under the weapons

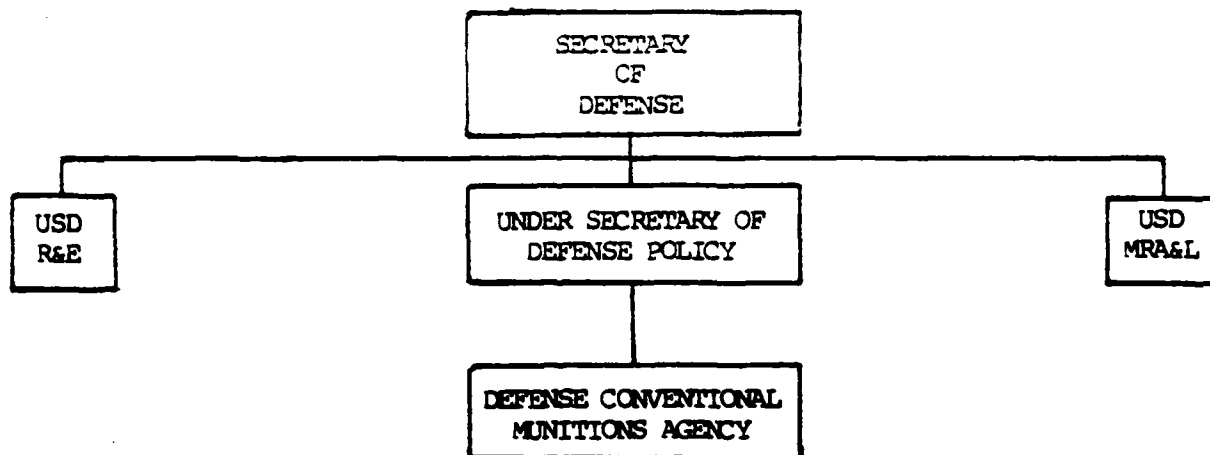


Figure 1

system concept. Moreover, there is already an USD responsible for weapon system R&D policy within the DOD. It is also recognized that RDT&E functions significantly affect the production methodology and life cycle costs of munitions and this organizational structure has the potential for creating some interagency conflict with regard to overlapping responsibilities. In any case, the bureaucratic processes within OSD are beyond the scope of this paper and is an area for further study. However, it is essential that the DCMA, as the single manager for conventional ammunition, have a voice in: (a) standardization at the design stage for common-use items; (b) life cycle cost management of munitions proposed for large scale production; and (c) selection of facilities for low rate initial and follow-on production. The Director, Defense Conventional Munitions Agency (DCMA) would be the principal manager and coordinator for conventional munitions identified for centralized management and as such, would have responsibility for management functions in the following categories:⁴⁰

Production Base
Acquisition
Materiel Management
Maintenance/Renovation/Demilitarization/Disposal
Quality Assurance
Configuration Management and Control
Transportation and Handling
Safety
Security
Logistic Management Information System
Planning, Programming and Budgeting
Financial Management
Implementing Directives and Communications
Personnel Management and Unit Training
Research, Development, Test and Evaluation (RDT&E) Coordination

Essentially, the DCMA would operate under a single manager for conventional munitions concept with the authority to ensure there is congruence between the military services' requirements, JCS approved war, mobilization, and contingency plans and national security strategy priorities. The services would retain responsibility for those munitions determined to be highly specialized and peculiar to a single service—certain guided missiles, naval mines, torpedos, depth charges, and the like. The services would also retain responsibility for RDT&E of ammunition developed by the individual services, including fabrication, testing, and evaluation of any developmental ammunition

fabricated by the DCMA and for low-rate initial production. The DCMA would also be responsible for production of commonly used components and "explosive fill" for the services.

The services would prepare and submit their 5-year conventional ammunition requirements--training and operational support--to the DCMA. The DCMA would consolidate the services' 5-year plans and prepare the necessary Program Objective Memorandum (POM) documentation in consultation with the services, JCS, and OSD.

Management of the production base, maintenance programs, and overall materiel management functions associated with managing a wholesale ammunition system would be the responsibility of the Director, DCMA. Inventory management is based upon the following definitions.⁴¹

Wholesale Inventory - All conventional ammunition stocks on the formal accounting records of the DCMA which has not been issued to the services.

Retail Inventory - Conventional ammunition stocks receipted for by the services and recorded on their formal accounting records. Physical custody of ammunition stocks does not determine ownership. Retail inventory-level stocks may be stored at wholesale storage facilities and vice versa.

Common Ammunition - An ammunition item that is operationally employed by more than one military service.

Peculiar Item - An ammunition item that is operationally employed by only one military service.

The services would be required to provide the DCMA retail ammunition stock stratification data on a periodic basis. This data would be transmitted via a standardized, integrated logistics management information system managed by the DCMA.

The Director, DCMA will be assisted in accomplishing his mission by a deputy, and three executive directors (Figure 2). To minimize the perception of service parochialism, the directorship would rotate between the service departments. The Deputy Director, DCMA will have staff cognizance over the DCMA Inspector General's (IG) activities. The IG will evaluate DCMA staff and field operations to ensure they are in compliance with all applicable directives and regulations and the IG teams will be augmented by DCMA staff as required.

Executive Director, Resources, Plans, Programs and Policies

The Executive Director, Resources, Plans, Programs and Policies (PRP&P) is the principal executive assistant responsible for developing authoritative, comprehensive and well coordinated programs to ensure the accomplishment of actions essential to achieve the objectives of DCMA. The Department of Defense Explosive Safety Board (DDESB), which is currently functioning under the staff cognizance of the ASD (MRA&L), would also report to the Director, DCMA. The DDESB was established in 1928 and is charged with providing impartial and objective advice to the Secretary of Defense, the Secretaries of the military departments and the Directors of the Defense agencies on ammunition and explosive development, manufacturing, testing, handling, transportation, storage, maintenance, demilitarization and disposal. Placement of the DDESB within the organizational structure of the DCMA should significantly enhance the surveillance capability of the DCMA.⁴² The primary functions associated with these management responsibilities are categorized as follows:

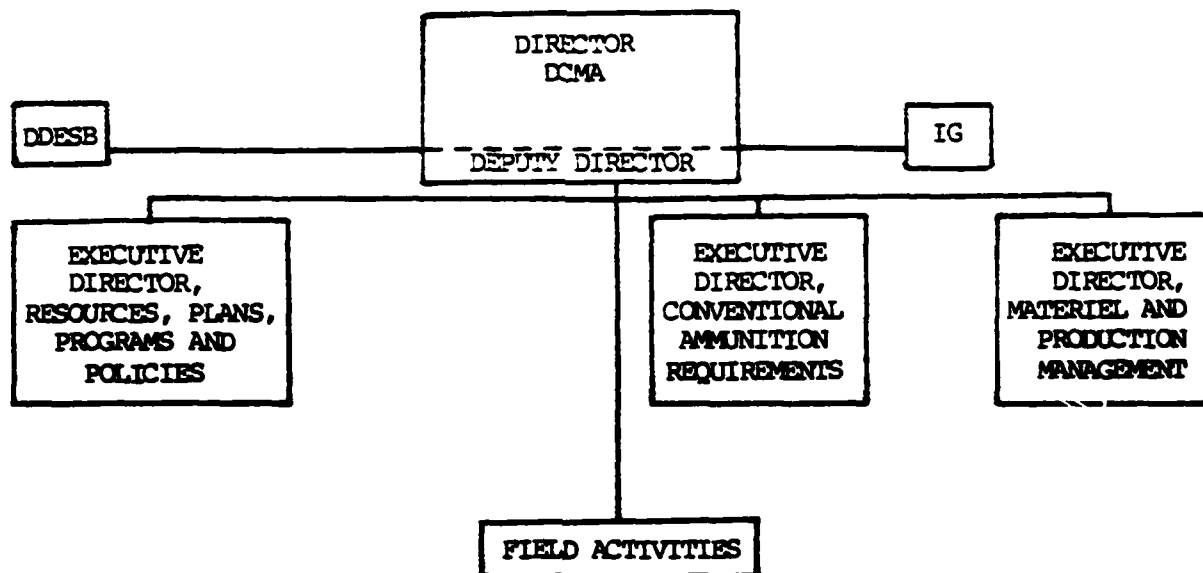


Figure 2

Office of Mobilization Planning

Develops, coordinates and maintains mobilization plans and procedures.

Develops, coordinates and maintains industrial preparedness plans.

Coordinates mobilization planning matters with other federal agencies.

Office of Resources Management

Plans, programs, and budget resources (manpower and funds) required for assigned responsibilities and functions. Also, plan, program, and budget resources where the DCMA is involved in a host-tenant relationship with budget for all facilities and plant equipment for manufacture of conventional ammunition.

Prepares, with assistance of the Military Services, and submit program changes in manpower as required either in POM or Program Changes Requests.

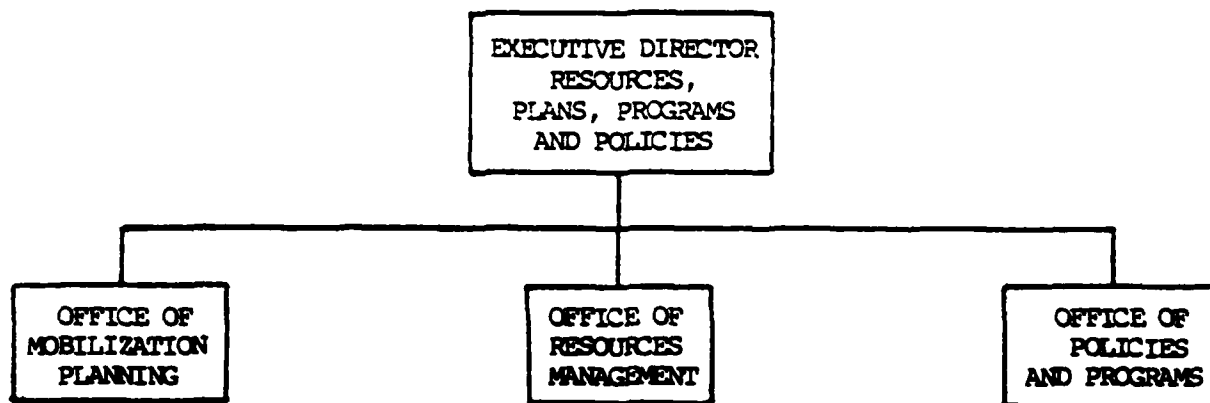


Figure 3

Consolidates the Military Services' 5-year Integrated Conventional Acquisition Plans and prepares with the assistance of the military services, a DOD 5-year Integrated Conventional Ammunition Acquisition Plan for review by the OSD staff during the POM process.

Coordinates staff actions and ensures preparation and submission of the DCMA POM and required documentation. (Figure 4)

Develops and maintains the Charter for a Conventional Ammunition Working Capital Fund (CAWCF), which shall be approved by the Assistant Secretary of Defense, Comptroller [ASD(C)], under 10 U.S.C. 2208 for managing, controlling, financing, accounting, and reporting for the procurement of ammunition components and end items. Standard prices and pricing procedures will be established in accordance with the CAWCF or otherwise authorized by DOD regulations.

Manages, operates, and maintains a wholesale financial management system controlling acquisition, storage, and distribution, issues for consumption and demilitarization or disposal of conventional ammunition.

PLANNING PROGRAMMING AND BUDGETING CYCLE

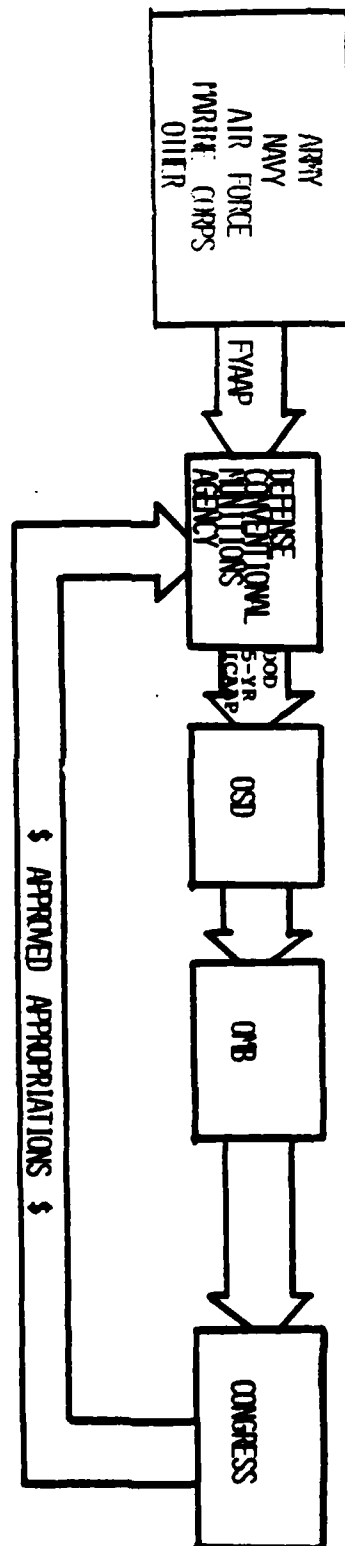


Figure 4. Planning Programming and Budgeting Cycle

Exercises primary responsibility for programming and budgeting actions relative to the CAWCF and performs accounting functions related to the CAWCF. Exceptions to these programming and budgeting actions will be authorized, as needed, by ASD(C) memoranda.

Manages manpower financial accounting functions.

Provides contract administration services, either separately or by arrangements with the Director, Defense Logistics Agency (DLA), during the acquisition of assigned ammunition.

Develops and manages the Quality Assurance Program for procurement and production of conventional munitions.

Office of Policies and Programs

Develops and coordinates policies and programs to ensure maximum utilization of the agency's resources.

Acts as the executive agent, supported by functional requirements from other DOD components, to develop, design and centrally maintain a standard logistics management information system.

Develops, coordinates, and maintains a comprehensive Organizational Master Plan.

Coordinates and implements all pertinent DOD and agency policy directives.

Coordinates and prepares all official responses to congressional requests for information.

Coordinates the scheduling of DCMA personnel required as congressional witnesses.

Develops and coordinates a system that ensures timely receipt, distribution within DCMA, and the prompt release of all governmental audit reports with appropriate comments to OSD.

Develops, coordinates, and maintains public information programs which are consistent with the objectives of the DCMA and enhance public opinion of the DCMA.

Develops and coordinates a system that ensures timely receipt of information on congressional legislation that is pertinent to DCMA operations.

Executive Director, Munitions Requirements

The Executive Director, Munitions Requirements is the primary executive assistant responsible for the consolidation of the military services' 5-year ammunition acquisition plans into the DOD 5-year Integrated Conventional Ammunition Plan and the preparation of appropriate Program Objective Memorandum (POM) support documentation. (Figure 5)

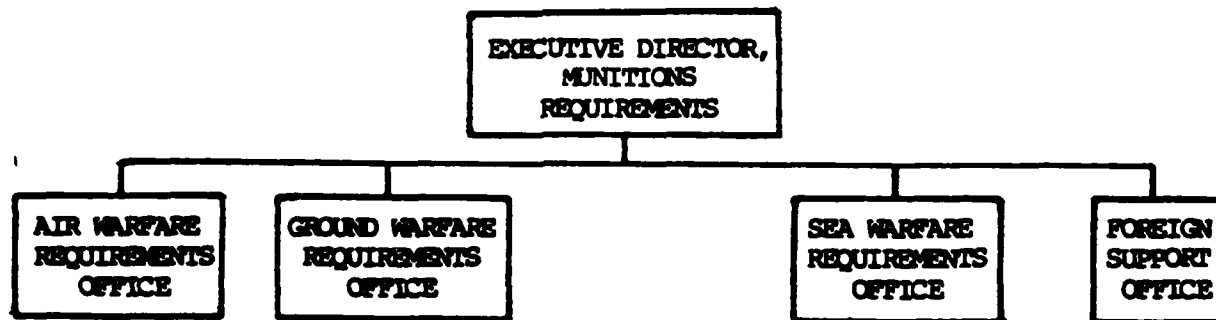


Figure 5

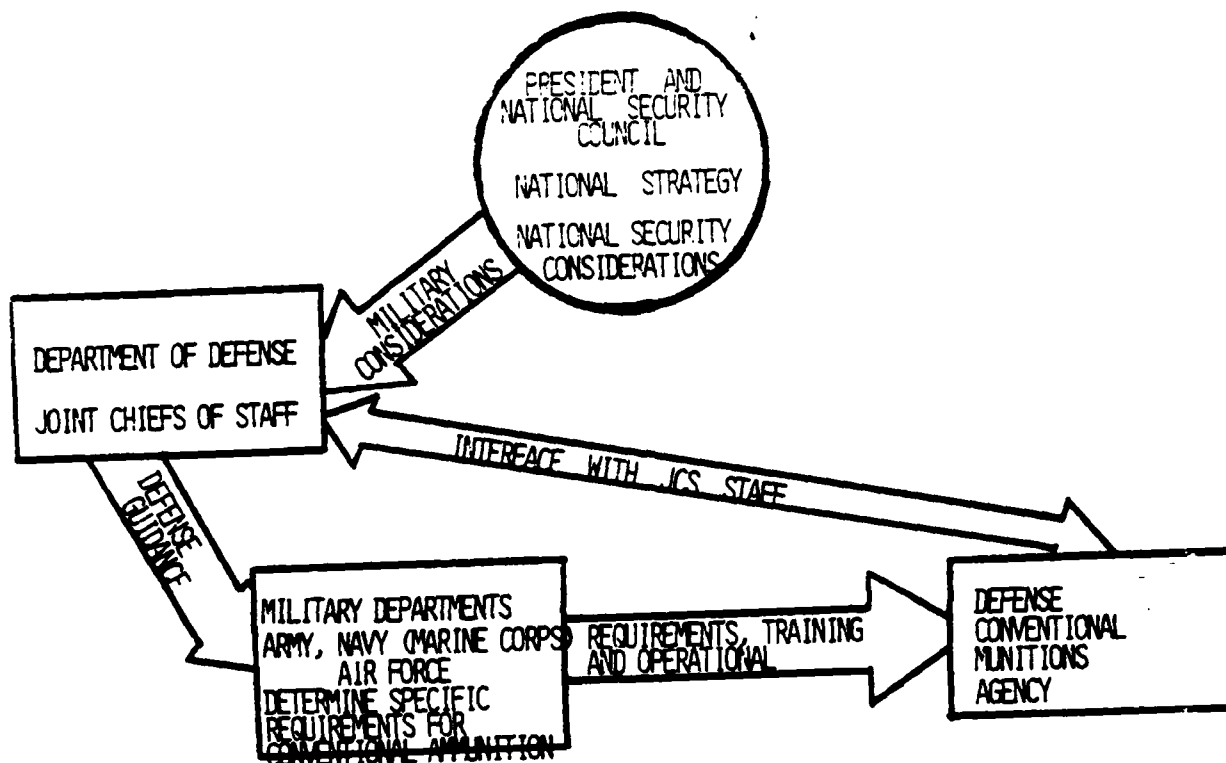


Figure 6

The ammunition POM would include services Research, Development, Test and Evaluation (RDT&E) programs as addenda. The services would retain responsibility for RDT&E and peculiar ammunition items but priorities, programs, and standardization would be coordinated with DCMA. If Congress reduces the conventional ammunition POM request, all reprogramming actions will be coordinated with the military services, the JCS, and the DCMA and the final decision should be dictated by National Security considerations consistent with the war plans of greatest strategic importance.

This office should be staffed with military and civilian ammunition specialists with professional experience and expertise commensurate with executive level management. The primary functions associated with these management and operational responsibilities are categorized as follows:

Air Warfare Requirements Office

Reviews and consolidates the military services 5-year ammunition acquisition plans for aviation-related ammunition.

Coordinates with the military services in the preparation of the aviation-related ammunition portion of the DOD 5-year Integrated Conventional Ammunition Acquisition Plan.

Coordinates with the Office of War Plans Support to ensure that aviation-related ammunition requirements are congruent with JCS approved war plans, contingency plans, and strategic requirements.

Participates as required in JCS sponsored war games as a DCMA representative on aviation-related ammunition matters.

Ground Warfare Requirements Office

Reviews and consolidates the military services' 5-year ammunition acquisition plans for ground-related ammunition.

Coordinates with the military services in the preparation of the ground-related ammunition portion of the DOD 5-year Integrated Conventional Ammunition Acquisition Plan.

Coordinates with the Office of War Plans Support to ensure that ground-related ammunition requirements are congruent JCS approved war plans, contingency plans, and strategic requirements.

Participates as required in JCS sponsored war games as a DCMA representative on ground-related ammunition matters.

Sea Warfare Requirements Office

Reviews and consolidates the military services' 5-year ammunition acquisition plans for Navy submitted ammunition requirements.

Coordinates with the military services in the preparation of the Navy submitted ammunition portion of the DOD 5-year Integrated Conventional Ammunition Acquisition Plan.

Coordinates with the Office of War Plans Support to ensure that Navy submitted ammunition requirements are congruent with JCS approved war plans, contingency plans, and strategic requirements.

Participates as required in JCS sponsored war games as a DCMA representative on Navy ammunition matters.

Foreign Support Office

Coordinates all requests for conventional ammunition from foreign allies with appropriate federal agencies and within DCMA for final disposition.

Participates as a backup witness for congressional hearings on matters pertaining to foreign requests for conventional ammunition as required.

Provides information to the JCS' Joint Materiel Priorities and Allocation Board (JMPAB) on foreign allies' requests for conventional ammunition as required.

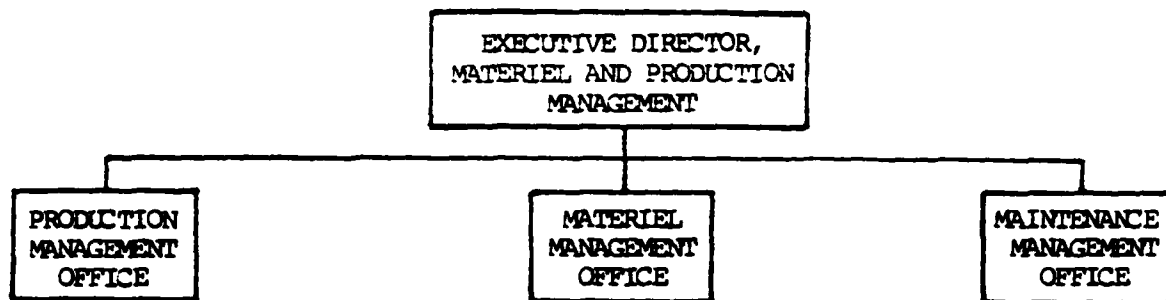


Figure 7

Executive Director, Materiel and Production Management

The Executive Director, Materiel and Production Management is the principal executive assistant responsible for managing the acquisition of conventional ammunition, the production base, and the wholesale inventory. In some cases, the DCMA will be a tenant activity on installations which are owned and operated by the military services. The primary functions associated with these management and operational responsibilities are categorized as follows: ⁴³

Production Management Office

Manages, operates, and maintains DOD installations and facilities involved in, capable of, and required for manufacturing assigned ammunition. For production facilities retained by the military services, the DCMA shall seek the best balance between service objectives for facilities that the services will continue to manage and operate, and DCMA objectives for management of the ammunition production base.

Ensures that there is an adequate production base to meet peacetime, surge and mobilization requirements.

Encourages participation and investment by the private sector to minimize the need for government-financed facilities.

Ensures a balance in ammunition component and end item production capacities for surge and mobilization purposes.

Coordinates common research projects between the services and provide production support as required by the services.

Manages the quality control program established in consultation with the military services for assigned ammunition during procurement and production, including first article testing and approval.

Manages a quality control program during storage, maintenance, renovation, and demilitarization and disposal of wholesale assets, consistent with the programs of the military services. Where deviations are deemed necessary, the DCMA shall negotiate with the individual service for resolution.

Establishes and maintains configuration controls for assigned ammunition that complements the military services' configuration management life cycle system.

Participates in configuration control of assigned ammunition to assure full consideration of actions on DCMA logistic schedules and cost, and production base impacts.

Serves as technical advisor to the DOD Explosive Safety Board on matters related to assigned ammunition.

Assures that safety standards are adhered to in the conduct of the DCMA mission.

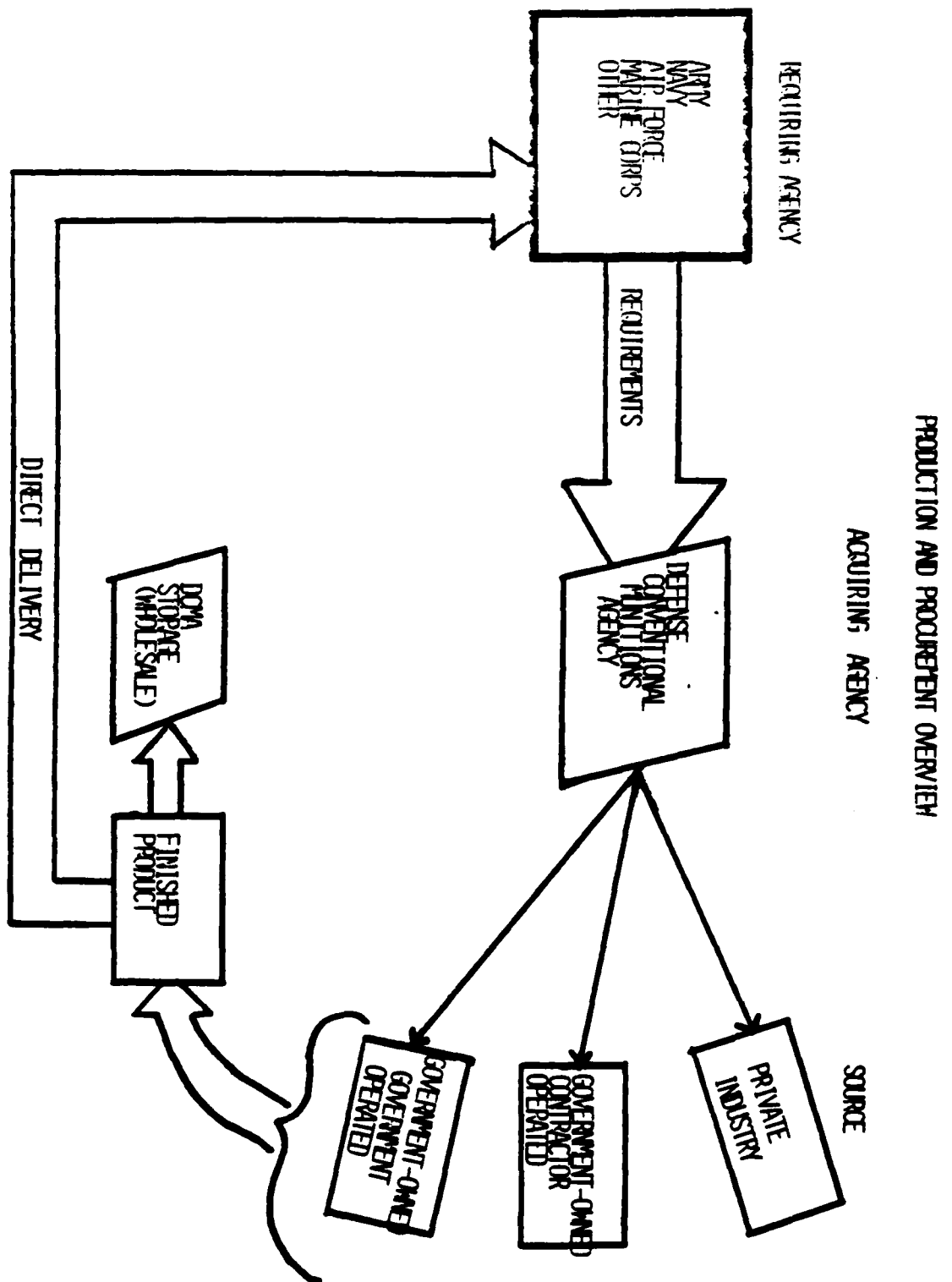


Figure 8. Production and Procurement Overview

Materiel Management Office

Ensures acquisition of conventional ammunition in support of the services requirements as submitted in the consolidated 5-year Integrated Acquisition Plan and approved by Congress. (Figure 9)

Prepares advance acquisition plans for assigned ammunition, with the assistance of the military services.

Provides advice to the military services for consideration in the preparation and approval of 5-year integrated acquisition programs.

Establishes an industrial advisory committee of ammunition producers.

Provides inventory management for assigned conventional ammunition at the wholesale level.

Operates assigned DCMA installations and facilities and provides direction in inventory management, including the receipt, storage, maintenance, and issue of wholesale conventional ammunition, to operating installations and facilities that perform supply functions in support of the DCMA mission.

Aggregates requirements and initiates procurement, renovation, and demilitarization directions and standards.

Develops and implements a wholesale, distribution system to meet projected and contingency needs of the military services, based on their asset stratification plans provided to the DCMA.

Performs physical inventories and maintains accurate stock records.

Maintains inventory data on quantity, location, and condition of DCMA-assigned ammunition as reported by the military services' retail storage activities.

Issues from the wholesale system, based on line item demand documentation transmitted by the military services, in accordance with the movement and issue priority system.

Provides physical security of sensitive conventional ammunition and explosives.

Provides physical security and protection of industrial facilities managed.

Manages transportation and handling of assigned ammunition during procurement and production to the point of receipt by Continental United States (CONUS) retail customers and overseas customers at CONUS ports of embarkation, in coordination with other single managers for transportation.

Maintenance Management Office

Manages and operates a national maintenance management point.

Operates assigned DCMA installations and facilities and provides direction to other operating installations and facilities that perform maintenance in support of the DCMA mission.

Maintains and renovates wholesale assets.

Plans, programs, budgets, and funds for wholesale minor maintenance and major maintenance (renovation and modification) on a cross-service basis, based on technical data and requirements provided by the military services.

Demilitarizes and disposes of all materiel at installations and facilities on a common service basis supported by demilitarization and disposal technology provided by the military services, in accordance with current regulations and support provided by the DLA.

Acquires equipment and facilities required for maintenance, renovation, and conversion of assigned materiel and demilitarization and disposal of all materiel at wholesale locations on a common service basis.

CHAPTER III

FOOTNOTES (Pages 40-78)

¹U.S. Comptroller General, Centralized Ammunition Management - A Goal Not Yet Achieved, A Report to Congress, Report No. LCD-80-1 (Washington: U.S. General Accounting Office, 1979), pp. 5 and 26. See also U.S. Department of the Army. Report of the Conventional Ammunition Special Review (U) CASPR, 2 vols. (Washington: Army Inspector General Agency, 1980), p. 403. SECRET

²Francis E. Rourke, ed., Bureaucratic Power in National Politics (Boston: Little, Brown and Co., 1972), pp. 87-88. See also Martin Albrow, Bureaucracy (New York: Praeger, 1970), p. 89.

³Comptroller General, Centralized Ammunition Management - A Goal Not Yet Achieved, p. 26.

⁴Felipe Nigro and Lloyd G. Nigro, Modern Public Administration (New York: Harper and Row, 1973), pp. 192-193.

⁵Ibid., p. 193.

⁶U.S. Department of Defense, Single Manager for Conventional Ammunition, ASD (MRA&L), DOD Directive 5160.65 (Washington: 1981), pp. 1-10.

⁷Army, Report of the Conventional Ammunition Special Review (U) CASPR, pp. 428-430.

⁸"Reforming the Pentagon." Newsweek, 20 December 1982, p. 32.

⁹Winston S. Churchill, et al., The Second World War (New York: Time, Inc., 1959), p. 143.

¹⁰Ibid., p. 219.

¹¹Ibid., p. 261.

¹²Ibid.

¹³Alan S. Milward, War Economy and Society 1939-1945 (Los Angeles: University of California Press, 1979), p. 104.

¹⁴Ibid., pp. 112-113 and 119.

¹⁵Ibid., p. 123.

¹⁶Ibid., p. 124.

¹⁷Ibid., p. 113.

18Ibid., pp. 109-126.

19Gordon Wright, The Ordeal of Total War 1939-1945 (New York: Harper and Row, 1968), p. 62.

20National Security and Mobilization Management, Comparative Industrial Capabilities of Major Combatants During World War II (Washington: National Defense University, Industrial College of the Armed Forces, 1982), pp. 38-52.

21Milward, War Economy and Society 1939-1945, pp. 119-123.

22U.S. Congress, House, Committee on Government Operations, Subcommittee on Legislation and National Security. Defense Departments Failure to Properly Manage Conventional Ammunition, Hearing (Washington: U.S. Government Printing Office, 1982), p. 4.

23Ibid., p. 5.

24U.S. Defense Supply Agency, Mission, Organization and Functions of the Defense Supply Agency (Cameron Station, Alexandria: U.S. Department of Defense, 1963), n.p.

25Earl Nichols, "Direct Commission," Dimensions, October 1981, p. 6.

26U.S. Defense Supply Agency, Mission, Organization and Functions of the Defense Supply Agency, n.p.

27Nichols, "Direct Commission," Dimensions, p. 6.

28Ibid., p. 7.

29Letter from J. R. Sculley, Assistant Secretary of the Army (Research, Development and Acquisition) to the Honorable Jack Brooks, Chairman, Committee on Government Operations, House of Representatives, 18 June 1982, p. 2.

30Ibid., n.p. See also Letter with attached position papers from Mr. Robert D. Hartnett, Chairman, Joint Conventional Ammunition Program Executive Committee, to Major General Benjamin F. Register, Jr., USA, Chairman, Joint Conventional Ammunition Program Coordinating Group, 3 September 1982, n.p.

31Letter from Mr. Robert D. Hartnett to Major General Benjamin F. Register, n.p.

32Memorandum, Joint Chiefs of Staff, MDCS-6-83, Washington, Subject: Conventional Ammunition Allocation Policies and Procedures, 6 January 1983, p. 2.

33Letter from J. R. Sculley to Honorable Jack Brooks, p. 1.

³⁴Letter from Mr. Robert D. Hartnett to Major General Benjamin F. Register, n.p.

³⁵Ibid.

³⁶Ibid.

³⁷Memorandum with attachments, Lieutenant General Donald M. Babers, USA, to Secretary of the Army, 24 January 1983, n.p.

³⁸Ibid.

³⁹Ibid. See also Army, Report of the Conventional Ammunition Special Review (U) CASPR, p. 4.

⁴⁰Department of Defense, Single Manager for Conventional Ammunition, DOD Directive 5160.65, p. 3.

⁴¹U.S. Department of the Army, Single Manager for Conventional Ammunition Implementation Plan (Washington: 1977), p. 3-1.

⁴²Department of Defense, Explosives Safety Board (Washington: n.d.), p. 1-3

⁴³Department of Defense, Single Manager for Conventional Ammunition, DOD Directive 5160.65, p. 3.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

This study has provided a review of United States conventional ammunition in the following areas: A historical review of conventional ammunition management; a synopsis of previous studies identifying significant problems; an analysis of current ammunition management problems; a discussion of the arguments for and against centralization of management; and a proposed organization designed to streamline ammunition management.

There has already been a great deal written on this complex and vital subject. Yet it is obvious that serious problems still remain to be solved. It is clear that some worthwhile improvement to the ammunition management system has been made since the 1972 LMI study first stimulated high level interest. However, those that have occurred have been painfully slow in evolving, and have fallen far short of what is needed to provide fully effective ammunition support for the U.S. Armed Forces.

What is more important to the security of the United States is that the current SMCA systems--both the organization and the process--has reached the limit of its potential for improvement. That is, further incremental changes to the present system are likely to yield only a marginal payoff in terms of effectiveness and economy.

This study represents a sincere attempt to break the conceptual log-jam by approaching the problem from the so-called "purple suit" perspective, with a primary focus on mobilization needs. A review of the literature will reveal this to be an original approach, not provided by the many previous studies and

investigations. The model organization offered therefore represents a significant departure from previous proposals to resolve the problem. Nevertheless, the study group readily acknowledges that some aspects of the model will benefit from further refinement.

Some important areas or issues suggested for further analysis are:

The wholesale/retail division as it pertains to procedures for issues, expenditures, disposal, and accountability.

Personnel turbulence, manpower costs, and/or savings, associated with adopting the model organization.

The interface with the JCS warplanning process and FEMA mobilization planning process.

Advantages to be gained in the area of Foreign military sales by adopting the model organizations.

Potential areas of further interservice standardization of munitions, technical data, and training.

An evaluation and rationalization of real property facilities which would be needed in adopting the model organizations.

Long term costs/savings associated with adoption of the model organization.

Further study of the above areas, perhaps by succeeding ICAF study groups, would enhance the practical usefulness of the proposed model. However, the fact that limitations on time prevented reviews of these issues does not invalidate this study--which is intended to provide movement toward the optimal organizational framework from the standpoint of mobilization effectiveness. Those issues not studied, though important, were not considered central to the main criteria of mobilization effectiveness.

There are those that would argue this point with respect to the issue of the cost of creating a new DOD level agency for ammunition management. In return one must only ask what cost is a reasonable price to pay for the security of a nation. Cost will not be the real reason for avoiding a DOD level management agency, for it is not difficult to appreciate how existing facilities experienced personnel, and equipment could be usefully employed within the new organization.

The real issue inhibiting resolution of our ammunition management problem is change--the bureaucratic resistance to change that Herbert A. Simon and others have called "inertia."¹ Any change to our current system that represents much more than a non-threatening incremental modification--such as the model organization offered herein--is likely to require intervention by the highest level of government. Even then the process may be accompanied by further frustrating resistance. As President Franklin D. Roosevelt once remarked:

To change anything in the Na-a-vy is like punching a feather bed. You punch it with your right and you punch it with your left until you are finally exhausted, and then you find the damn bed just as it was before you started punching.²

In the case of our munitions management reform experienced to date, President Roosevelt might well have included the Army and the Air Force.

Despite the controversial nature of munitions management reform, the authors do not hesitate to recommend that the proposed model organization and process be seriously considered and adopted. There are no dissenters within the study group! But more realistically perhaps, it is strongly recommended

that this framework be further reviewed and expanded by succeeding study groups within the Industrial College of the Armed Forces. In addition, it may be useful to tie such analysis into study of the JCS reform issue, in view of the strategic planning implications inherent to the problem. In any event, there are few issues more vital to national security, or more pertinent to mobilization planning than conventional munitions management reform.

CHAPTER IV

FOOTNOTES (Pages 82-85)

¹Francis E. Rourke, ed., Bureaucratic Power in National Politics (Boston: Little, Brown and Co., 1972), p. 33.

²Ibid., p. 88.

POSTSCRIPT

It must be considered that there is nothing more difficult to carry out, nor more doubtful of success, nor more dangerous to handle, than to initiate a new order of things. For the reformer has enemies in all those who profit by the old order, and only lukewarm defenders in all those who would profit by the new order, this lukewarmness arising partly from fear of their adversaries, who have the laws in their favor; and partly from the incredulity of mankind, who do not truly believe in anything new until they have had actual experience of it. Thus, it arises that on every opportunity for attacking the reformer, his opponents do so with the zeal of partisans, the others only defend him halfheartedly, so that between them he runs great danger.*

*Niccolo Machiavelli, quoted in Keith David, Organizational Behavior (New York: McGraw Hill, 1874), p. 159.

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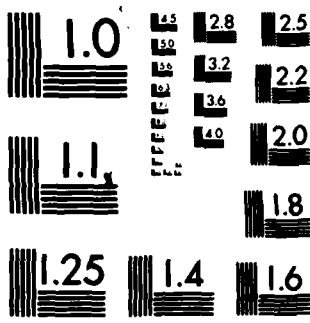
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